/

REPORT OF THE HUMAN TUBERCULOSIS SURVEY

IN

NEBRASKA

NEBRASKA. STATE PLANNING BOARD

January 1939

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FOREWORD

The purpose of this report is to present available information concerning the tuberculosis problem in the State as revealed by the existing records and by the results of the Survey of Human Tuberculosis authorized by the 1937 Unicameral Legislature.

This report contains: a short history of medical practice in Nebraska as it relates to tuberculosis; an account of present conditions concerning tuberculosis in the State as shown by a ten year record of deaths and a questionnaire-survey made with the cooperation of doctors and hospitals; an explanation of the results of the County Surveys of Tuberculosis in Phelps, York, Dundy, and Hitchcock counties; and a summary of the available facilities for the care of the tuberculous in Nebraska.

In the hope of helping the people of Nebraska in their efforts to discover and to control tuberculosis, by being informed as to the manner in which the disease is transmitted and how the spread of infection may be checked, this report is presented.

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INTRODUCTION

Physicians began practicing medicine in what is now our State as early as the week of September 26, 1819[1]. At that time two, and possibly four medical officers accompanying a regiment of United States soldiers, landed at the present sight of Fort Calhoun, sixteen miles north of Omaha. By the time Nebraska became a territory in 1854, the practice of medicine was well established in all of the larger settlements.

With the growth of population, Nebraska experienced spectacular changes in the development of the medical sciences as it did in the development of all the other phases of the State's activities. This early period marked the beginning of preventive medicine. The majority of pioneers knew nothing of contagion.

As medical science progressed, perhaps there was no greater advancement in the treatment of any other disease than that of tuberculosis. In those early days, climate in relation to "consumption" was considered very important. An Iowa physician wrote in The Omaha Clinic, December 1893, "A well selected

[1]History of Medicine in Nebraska, Tyler and Auerbach

climate has a favorable influence on the great majority of cases of tuberculosis. The essential elements in a climate suited to consumptives are: altitude, dryness of soil and atmosphere, sunshine, equality of temperature, and freedom from noxious vapors. I would place the center of such a region at McCook, Nebraska, extending north to the North Platte and south fifty miles into Kansas and then some distance east and west of this line. The sandy soil, dry atmosphere, and pure drinking water make it possible for this region to become a paradise for consumptives."

Experiments in the open-air treatment of tuberculosis dates from 1894. An editorial in The Omaha Clinic, October 1894, reports the success of this treatment as practiced at Falkenstein in the Taunus Mountains in Germany. "Except for actually dressing and undressing, the windows of the room must be open day and night, in all weather and in all seasons. The results are said to be very satisfactory."

In the early history of Nebraska tuberculosis was thought to be practically incurable. Up until the 1890's editorials written in The Omaha Clinic considered the disease almost always fatal.

As time went on, sanatoria were built in favorable

localities. There was great confusion and contradiction as to what constituted a favorable locality. A physician stressed the merits of hot summers or cold winters, high altitudes or low altitudes, depending upon the location of his own particular practice. The importance of climate in the treatment of tuberculosis has been completely repudiated. Now, it is agreed that climate as a real factor in the cure of tuberculosis cannot be considered of first importance.

The following excerpt entitled, "Tuberculosis Then and Now" is quoted from Dr. F. A. Long's recent book entitled, A Prairie Doctor of the Eighties. "I began the practice of medicine the year of Dr. Koch's epochal discovery. Called upon to treat a patient with tuberculosis was not so different from being asked to attend a funeral. There was nothing one could do but stand by and watch the patient sinking. It is true, however, that in some cases the disease was arrested. Cod-liver oil, phosphate of lime, and the hypophosphates were highly extolled in those days. A generous diet of meats, milk and farinaceous articles, and the different vegetables were recommended. Tonics such as quinine were used. The outdoor life and travel were favorable conditions advised.

"In 1891, Dr. August Flint, at that time there was no

higher authority, believed tuberculosis to be pre-eminently a diathetic disease, and also taught the general belief in its non-communicability.

"Koch's valuable discovery came in 1882. He discovered the tubercle bacillus, and formulated rules for the identification of all disease germs. The white plague has been taken, within recent years, from the catalogue of the scourge of the ages to one of the preventable diseases.

"FOLLOWING KOCH'S DISCOVERY OF BACILLUS TUBERCULOSIS, A TUBERCULAR PATIENT WAS RECOGNIZED AS A CARRIER AND AS A POTENTIAL AND AN ACTUAL MENACE TO OTHERS IN THE SAME FAMILY. RECOGNITION OF THIS FACT AND A MODIFIED SEGREGATION OF THE AFFLICTED PERSON IN THE FAMILY HAVE GREATLY LIMITED THE SPREAD OF THE DISEASE."

In order to make segregation possible, it is necessary first to find the active cases. This report of the Human Tuberculosis Survey in Nebraska explains the procedure used to locate tuberculous patients who are not now under treatment and who are generally unaware of their condition, and the steps planned for the control of the disease in Nebraska.

I

STATE TUBERCULOSIS QUESTIONNAIRE SURVEY AND DEATH RECORDS

On February 27, 1936, a committee, representing the (State) Board of Control, the Nebraska State Planning Board, the (State) Department of Health, the Nebraska State Medical Association, and the Nebraska Tuberculosis Association met in Lincoln. Plans for a survey of the tuberculosis conditions in the State of Nebraska over a long term with a far reaching program for discovery, treatment, and control of tuberculosis were made. Since no funds for such a project were available, the responsibility and expense of carrying on the preliminary work were assumed by the five cooperating agencies.

The (State) Board of Control and the State Planning Board needed the statistical data on the number of living cases and the number of deaths resulting from tuberculosis. Their objective was to provide proper facilities for the care of the tuberculous.

The Nebraska State Medical Association, the Nebraska Tuberculosis Association, and the (State) Department of Health realized the need of a case-finding survey that would locate

every active case of tuberculosis and make it possible to assure adequate treatment for the patient as well as protection for the general public.

Questionnaire Survey

As a preliminary step in a case-finding survey, arrangements were made with the Nebraska State Medical Association and the Nebraska Osteopathic Association to send out questionnaires[1] to the doctors. These questionnaires were to be returned to the offices of their secretaries, and only the statistical information permitted to go outside their respective professional organizations. This assured privacy for the records and protection for the doctors in their confidential relation with their patients.

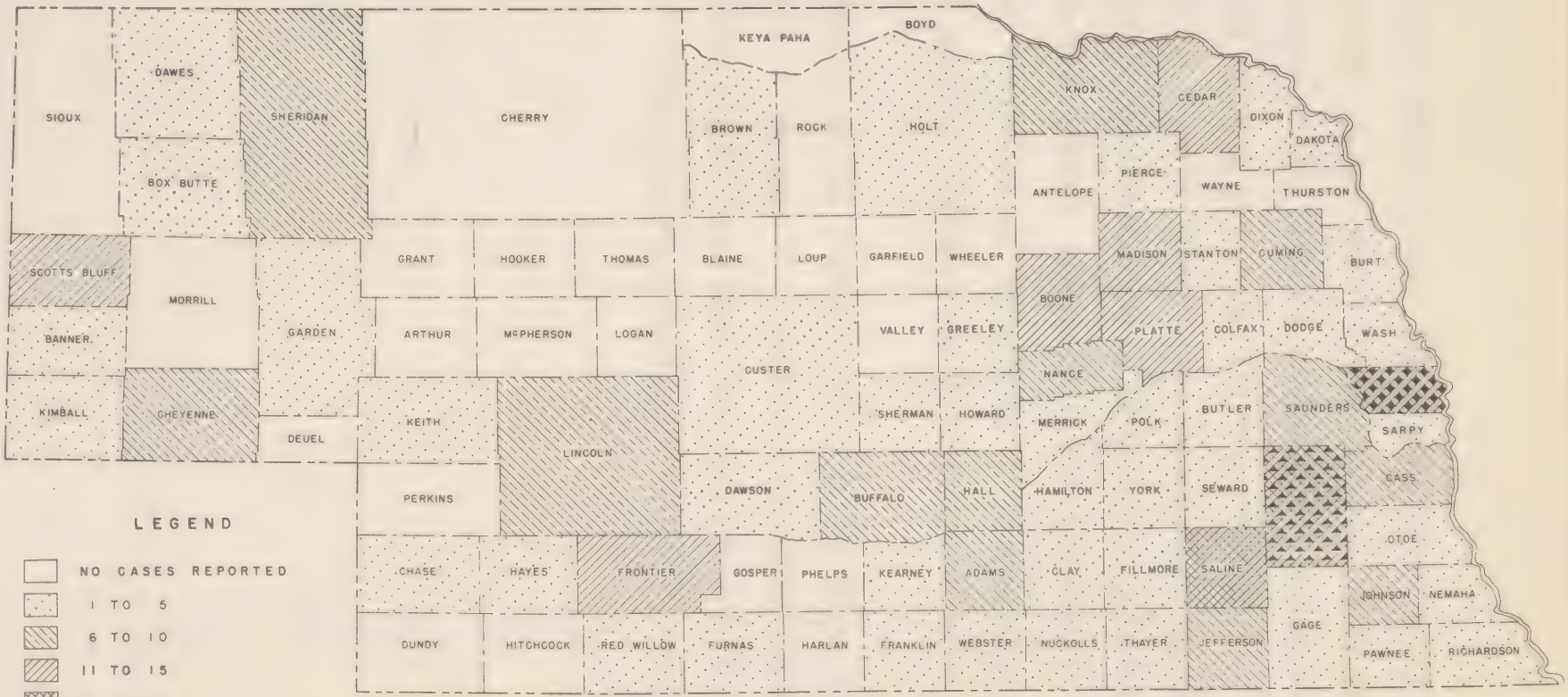
A special questionnaire[2] was sent to all hospitals in the State including the State institutions.

Ninety-four per cent of the doctors responded, reporting a total of 563 cases. The hospitals reported 584 cases on the special questionnaire. The total number of cases reported on this survey do not represent all the existing cases in the State. Furthermore, the hospital questionnaire did not call for as complete information as the doctor's questionnaire. The

[1] Form A - Appendix
[2] Form B - Appendix

MAP I

ACTIVE CASES OF TUBERCULOSIS
BY COUNTIES
NEBRASKA 1936



LEGEND

- NO CASES REPORTED
- 1 TO 5
- 6 TO 10
- 11 TO 15
- 21 TO 25
- 116 (LANCASTER)
- 141 (DOUGLAS)

IT IS NOT TO BE CONSTRUED THAT ALL ACTIVE CASES HAVE BEEN REPORTED.

SOURCE OF INFORMATION: QUESTIONNAIRES TO ALL PHYSICIANS. (584 CASES REPORTED ON QUESTIONNAIRES TO HOSPITALS NOT SHOWN).

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analyses that follow in this report were based on the information received on the doctor's questionnaire. It is believed that the return on the doctor's questionnaire constituted a large enough sampling to justify its use. Map 1 shows the number of active cases of tuberculosis by counties for 1936 as reported by the physicians on their questionnaire. The 584 cases reported on the hospital questionnaire are not shown on Map 1. For further information on the results of the questionnaires in individual counties, reference may be made to Table A in the Appendix.

An analysis of the financial status of 563 living cases of tuberculosis in Nebraska as reported on the doctor's questionnaire brought out the fact that less than one-half of these patients are financially able to support themselves, as shown in Table 1.

TABLE 1

Financial Status of Living Cases of Tuberculosis by Age Groups Reported on Questionnaire Survey

Nebraska
1936

Age Groups	Self Supporting		Border Line		Relief		Can Pay For Hospitalization			
							Yes		No	
	M	F	M	F	M	F	M	F	M	F
Under 5	1	3	0	1	1	0	1	2	0	1
5 - 9	3	5	2	3	5	4	1	3	2	1
10 - 14	4	6	6	3	5	8	3	4	1	3
15 - 19	6	9	5	7	6	0	5	1	4	3
20 - 24	3	20	4	11	8	10	1	6	3	14
25 - 29	14	20	10	13	0	9	4	8	9	14
30 - 34	11	35	7	12	9	6	6	17	6	17
35 - 39	8	22	6	6	5	2	3	5	8	10
40 - 44	10	16	2	2	7	7	1	3	9	10
45 - 49	14	14	5	2	4	3	1	8	11	1
50 - 54	6	5	1	4	2	3	4	2	2	2
55 - 59	3	4	2	1	0	0	1	3	3	1
60 - 64	6	2	1	2	2	0	6	1	1	1
65 - 69	0	4	0	1	0	1	0	2	0	1
70 - 74	0	1	0	2	0	0	0	1	1	1
75 - 79	1	1	1	0	0	0	0	0	1	0
80 - 84	-	-	-	-	-	-	-	-	-	-
85 - 89	-	-	-	-	-	-	-	-	-	-
90 & Over	-	-	-	-	-	-	-	-	-	-
Age Unknown	4	6	4	5	4	6	2	4	0	3
Total	94	173	56	75	58	59	39	70	61	83

The incidence of tuberculosis in Nebraska, as revealed by the questionnaire, increases gradually from childhood until it reaches its maximum in the 30 to 34 age group. It is difficult to compare the males and females, because more reports were received on females than males. However, it appears that there

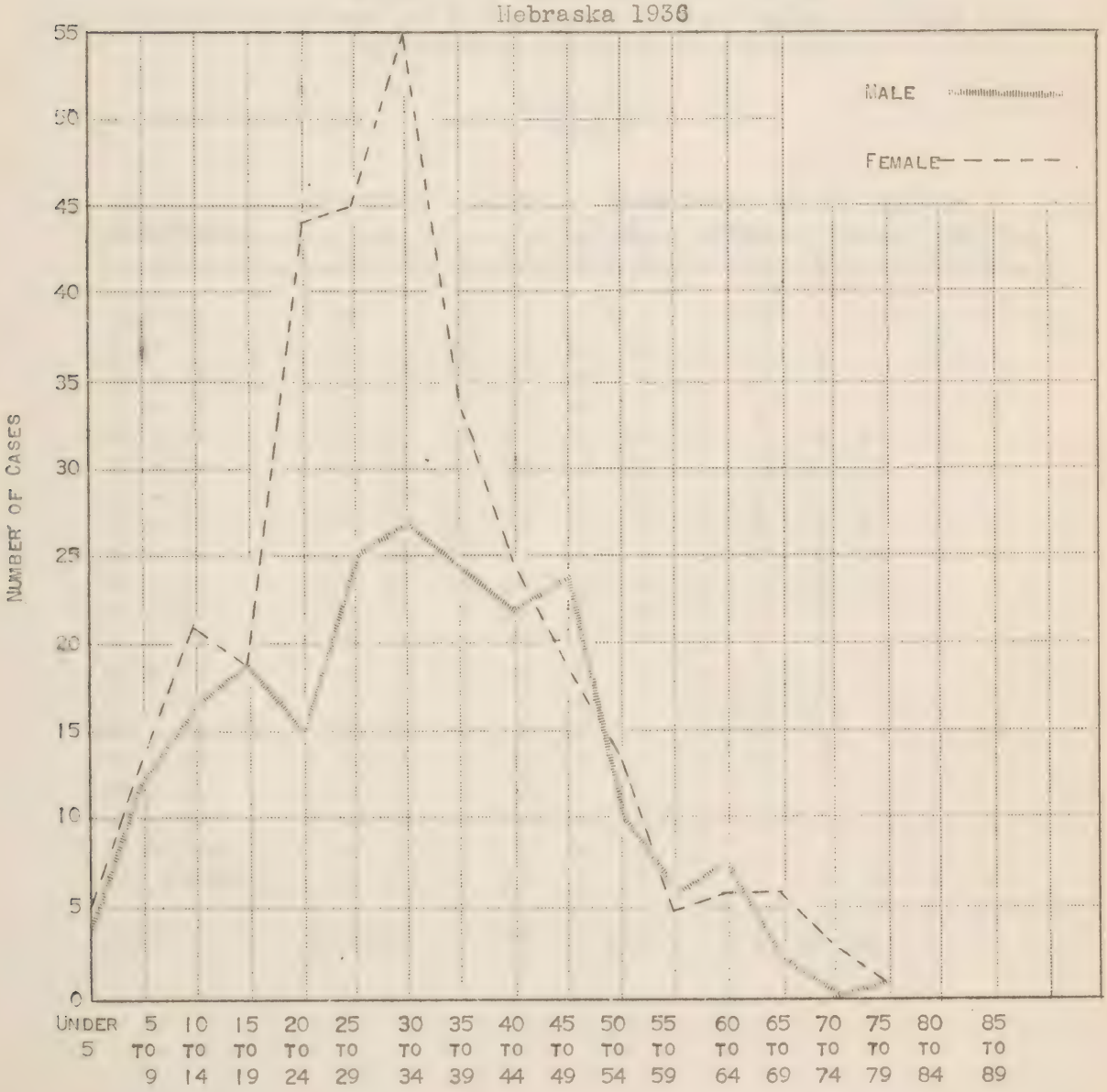
TABLE 2

Number of Cases of Tuberculosis
Reported on Questionnaire Survey
Nebraska 1936

	Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89
Male	4	13	17	19	15	25	27	24	22	24	10	6	8	2	0	1	0	0
Female	5	13	21	19	44	45	55	34	25	19	14	5	6	6	3	1	0	0

CHART 1

Number of Cases of Tuberculosis
Reported on Questionnaire Survey
Nebraska 1936



are more cases of girls and young women than boys and young men. While in the 35 to 45 age group, they are practically the same and after that the infection in the males seems to be greater.

Table 3 shows the method of diagnosis being used by the doctors in Nebraska reporting cases. The clinical examination and the X-ray are the leading methods of diagnosis.

TABLE 3

Method of Diagnosis of Living Cases of Tuberculosis by Age Groups Reported on Questionnaire Survey

Nebraska
1936

Age Groups	Clinical		X-ray		Skin Test				Sputum			
					Pos.		Neg.		Pos.		Neg.	
	M	F	M	F	M	F	M	F	M	F	M	F
Under 5	4	1	4	4	2	4	0	0	0	0	2	1
5 - 9	8	6	10	11	12	10	0	0	0	0	2	1
10 - 14	11	19	13	16	14	8	1	0	3	5	1	5
15 - 19	16	17	17	15	15	8	0	1	5	7	6	4
20 - 24	13	39	13	41	7	16	0	1	9	23	3	7
25 - 29	22	43	25	38	8	23	0	0	10	20	6	5
30 - 34	22	49	19	50	8	23	0	2	14	21	2	15
35 - 39	19	33	22	33	8	5	0	2	13	17	1	4
40 - 44	21	19	17	22	6	7	0	0	9	16	6	2
45 - 49	20	17	18	14	6	8	1	2	15	5	2	5
50 - 54	10	13	5	11	2	8	0	0	5	7	1	2
55 - 59	6	6	6	3	0	2	0	1	5	3	1	1
60 - 64	6	6	4	6	2	3	-	-	3	4	2	1
65 - 69	2	4	1	3	0	1	0	0	0	3	0	0
70 - 74	0	3	0	3	0	1	0	0	0	0	0	0
75 - 79	1	1	1	1	0	0	0	0	0	0	1	1
80 - 84	-	-	-	-	-	-	-	-	-	-	-	-
85 - 89	-	-	-	-	-	-	-	-	-	-	-	-
90 & Over	-	-	-	-	-	-	-	-	-	-	-	-
Age Unknown	13	14	12	16	4	4	-	-	5	10	0	2
Total	194	290	187	287	94	131	2	9	96	141	36	56

Pulmonary tuberculosis far exceeds other types of tuberculosis in Nebraska. Table 4 illustrates this fact. It is interesting to note in this table the age groups in which pulmonary tuberculosis is very prevalent and the degree with which the numbers exceed the numbers of other types of the same age.

TABLE 4

Type of Tuberculosis by Sex and Age Groups
Reported on Questionnaire Survey

Nebraska
1936

Age Groups	Pulmonary		Gland		Bone		Renal		Other	
	M	F	M	F	M	F	M	F	M	F
Under 5	3	3	1	0	1	1	0	0	0	1
5 - 9	9	9	4	3	1	0	0	0	0	2
10 - 14	14	15	5	4	0	2	0	0	1	2
15 - 19	16	16	1	0	1	0	1	0	1	2
20 - 24	13	42	1	0	1	1	1	1	1	3
25 - 29	24	39	0	3	0	0	0	1	3	0
30 - 34	24	50	2	2	0	0	1	0	2	5
35 - 39	20	31	0	0	1	0	1	1	0	3
40 - 44	20	25	0	1	0	0	1	1	1	0
45 - 49	23	18	2	0	0	0	0	0	1	1
50 - 54	10	13	0	2	0	0	0	0	1	2
55 - 59	6	4	1	0	0	0	1	0	0	1
60 - 64	7	6	1	0	1	0	1	0	1	0
65 - 69	2	6	0	0	0	0	0	0	0	0
70 - 74	0	3	0	0	0	0	0	0	0	1
75 - 79	1	1	0	0	0	0	0	0	0	0
80 - 84	0	0	0	0	0	0	0	0	0	0
85 - 89	0	0	0	0	0	0	0	0	0	0
90 & Over	0	0	0	0	0	0	0	0	0	0
Age Unknown	10	19	0	0	1	0	0	0	2	0
Total	202	300	18	15	7	4	7	4	14	23

There are other important and determining factors found on the questionnaire reports from the doctors. (Table 5) Statistics show that there is a small percentage of negro population in the State. Results of a skin testing program in Omaha high schools in 1934 showed the following percentage of reactors: white and negro students 19.8 per cent, negro students 35 per cent. Reliable figures of other states have shown a high percentage of infection for the negro race. The race statistics from the questionnaire, however, show reports on few cases. The marital status of cases reported lists 269 people that are married. Naturally some of this group are living with their families which makes a bad situation, in that it helps spread the disease. The number of contacts in homes are, children 622 and adults, 1,008.

TABLE 5

Questionnaire Survey of Tuberculosis

Nebraska
1936

Summary of Returns from Questionnaire on 563 Cases

Race:	
White	537
Negro	12
Other	14
Marital Status:	
Married	269
Single	236
Widow or Widower	34
Separated	9
Divorced	9
Condition of Patient:	
Arrested	186
Undetermined	87
Active:	
Minimal	106
Moderately Advanced	99
Far Advanced	69
Previous Treatment:	
Home	294
Hospital	246
Surgical	110
Number of Contacts in Home:	
Children	622
Adults	1,008

Death Records

The data regarding deaths from tuberculosis in the past eleven years were gathered from the (State) Department of Health[1]. Their files showed 3,689 deaths from tuberculosis during this period. (Any differences between the figures used in this report and the figures used in reports of the (State) Department of Health are due to the interpretation of the records.) This number does not include the deaths in Nebraska of persons with legal residences in some other state. Map 2, taken from Table A in the Appendix, gives the reader the geographical location of deaths from tuberculosis for an eleven-year period. The information in Map 2 was gathered from the death-record forms of the (State) Department of Health.

It is also important to know the death rate by counties, some counties being more densely populated than others. Map 3, tabulated from Table B. Appendix, shows the death rate[2], or the number of deaths per 100,000 population, in each county.

Decline in Number of Deaths

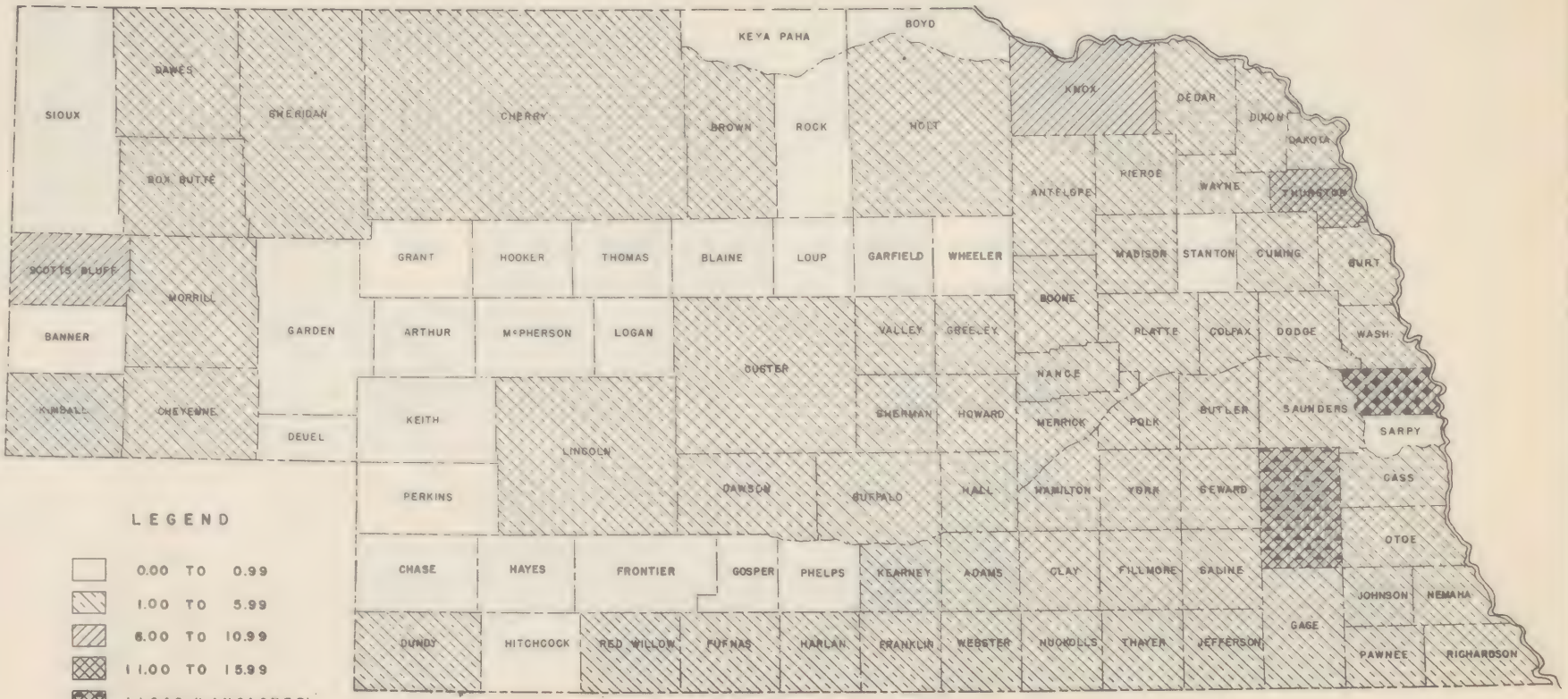
Tuberculosis has given way to several other diseases as the leading cause of death. A study of reliable figures shows that the decline in tuberculosis death rates has been phonomenal. No

[1] Form C - Appendix

[2] Death rate is an expression used in this report which is calculated on the basis of 100,000 population.

MAP 2

AVERAGE YEARLY NUMBER OF DEATHS FROM TUBERCULOSIS
BY COUNTIES, NEBRASKA
1926-1936



SOURCE OF INFORMATION: DEATH RECORDS—
STATE DEPARTMENT OF HEALTH.

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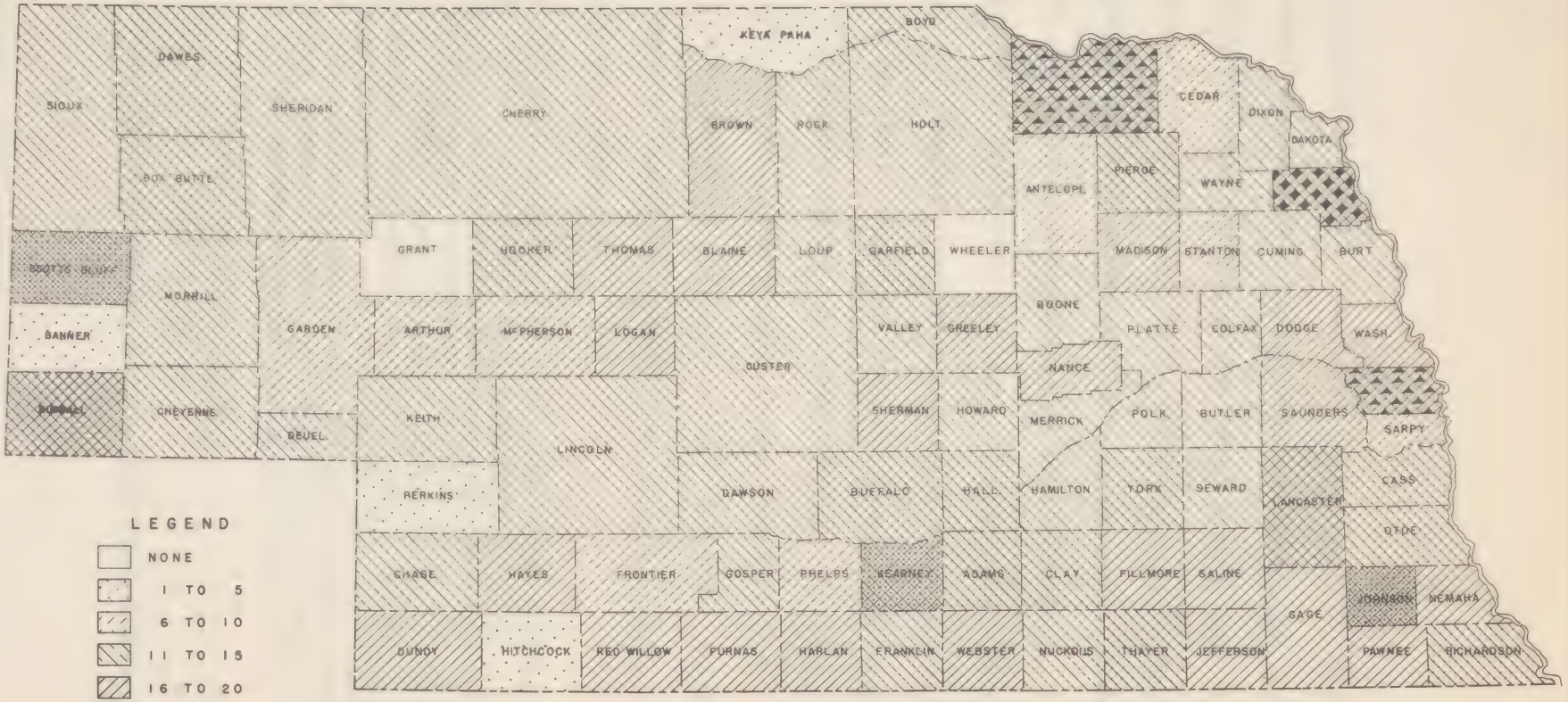
MAP 3

AVERAGE YEARLY DEATH RATES FROM TUBERCULOSIS

BY COUNTIES, NEBRASKA

1926-1936



LEGEND

- NONE
- 1 TO 5
- 6 TO 10
- 11 TO 15
- 16 TO 20
- 21 TO 25
- 26 TO 30
- 31 TO 35
- 46 TO 50
- 121 TO 125

SOURCE OF INFORMATION: UNITED STATES CENSUS, 1930,
DEATH RECORDS-
STATE DEPARTMENT OF HEALTH.

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one can state definitely the reason for this decline. There are probably many factors that have influenced the decline, such as improved sanitation and hygiene in the home, school, and public meeting places, a more balanced diet, labor saving devices, and better working conditions on the farm and in the city. A definite program of control and eradication of the disease which includes education, prevention and care, finding and isolating active cases and finding contacts, has also had its effects in causing a decline. This decline is shown graphically in Chart 2 for the United States and for Nebraska by decennial years from 1860 to 1930. For further study, refer to Table 6.

Tuberculosis, however, is still a very serious disease. Dr. Kendall Emerson[1] makes the following statement regarding the seriousness of the disease.

> "Conspicuous progress has been made in the prevention of tuberculosis since the first Christmas Seal was sold in 1907. Yet, in the United States today there are still half a million people suffering from this disease. It is still the leading cause of death in the prime of life. If everybody will cooperate, we can stamp out tuberculosis in the next generation. Public health agencies, tuberculosis associations, school officials, and other groups are joining hands in this winning fight to bring this greatest of all epidemics under permanent control."

Deaths from Tuberculosis
by Sex and Age

Despite the fact that the death rate from tuberculosis has

[1]Managing Director, National Tuberculosis Association

been reduced more than two-thirds in the past thirty years, it continues to take a heavy toll between the ages of 15 and 45 when a person's productivity is at its peak. Fifty per cent of all tuberculosis deaths occur during these ages. This distribution is entirely different from other leading causes of death, as shown by Chart 7, which appears later in the publication.

TABLE 6

Number of Deaths and Death Rates Per 100,000 Population From Tuberculosis
Decennial Years 1860 - 1930

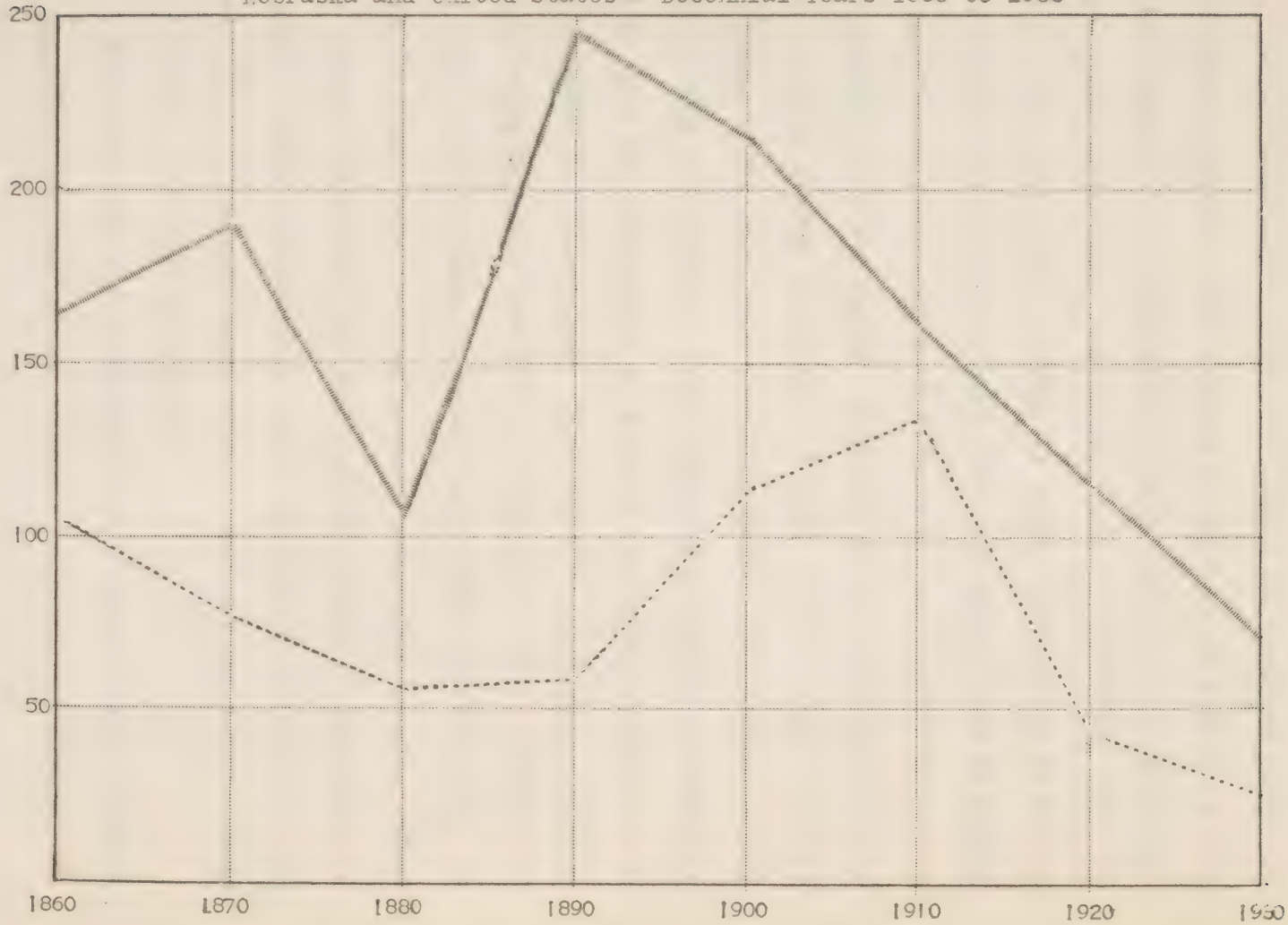
Year	UNITED STATES [1] Enumerated Population	Number of Deaths	Death Rates	Year	NEBRASKA Population	Number of Deaths	Death Rates
1860	31,443,321	51,785	164.7	1860	28,841	30	104.0
1870	38,558,371	73,314	190.1	1870	122,993	95	77.2
1880	50,538,366	91,270	106.9	1880	452,402	260	57.5
1890	19,659,440	48,236	245.4	1890	1,062,656	620	58.3
1900	28,807,269	61,888	214.8	1900	[2] 142,724	161	112.8
1910	53,531,742	86,309	160.3	1910	[2] 168,069	224	133.3
1920	87,632,592	99,916	114.0	1920	[2] 248,916	211	84.7
					1,296,372	561	43.3
1930	118,560,800	84,741	71.5	1930	[2] 290,700	130	44.7
					1,377,963	357	25.9

Source of Information: United States Census: Statistical Abstract,
Mortality Statistics

[1] Beginning with 1880, figures are for the registration area of the United States only.
[2] Registration Cities - Lincoln and Omaha

CHART 2

Tuberculosis Death Rates per 100,000 Population
Nebraska and United States - Decennial Years 1860 to 1930



NEBRASKA ..... UNITED STATES

SOURCE OF INFORMATION: UNITED STATES CENSUS BUREAU

It is important to note that while the greatest number of tuberculosis deaths occur between the ages of 15 and 45 in the United States and in Nebraska, Chart 3, this does not mean that the highest death rates for tuberculosis occur within that age group. Since the actual number of deaths at the age of 65 is less than at 35, it would appear that the death rate is higher at 35. However, the number of persons at the age of 65 is so much smaller than the number of people at 35, that the ratio of tuberculosis deaths to persons living is much higher at the older age. This is a very important fact. The deaths at the earlier ages are generally more discussed and much more work is being done for the purpose of working toward the eradication of the disease in those ages. This work is one of the definite steps being taken to control the disease in this generation. The fact still remains, however, that today, tuberculosis is actually a much more serious menace among older people. Since the losses by deaths are more costly at the younger ages, a greater amount of educational work is being done in this age group. The tuberculosis death rates by sex and age for an eleven year average are shown in Chart 4.

There are some other important relationships shown in Chart 4, regarding the death rates of males and females between the

TABLE 7

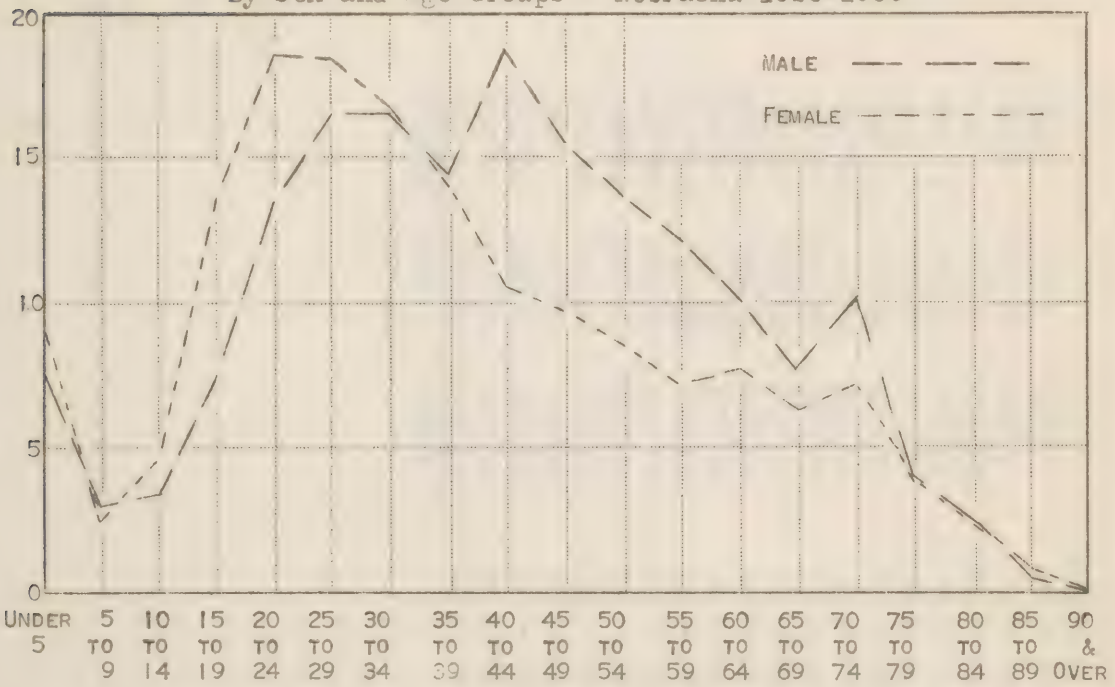
Average Number of Deaths From Tuberculosis
By Sex and Age Groups - Nebraska 1926-1936

Age Groups	Male	Female
All Ages	176.09	162.45
Under 5	7.36	9.18
5 - 9	3.00	2.36
10 - 14	3.36	4.64
15 - 19	7.27	13.82
20 - 24	13.46	18.64
25 - 29	16.46	18.45
30 - 34	16.46	16.82
35 - 39	14.36	14.09
40 - 44	18.73	10.36
45 - 49	15.55	9.73
50 - 54	13.82	8.55
55 - 59	12.18	7.27
60 - 64	10.09	7.82
65 - 69	7.73	6.27
70 - 74	10.09	7.18
75 - 79	4.00	4.00
80 - 84	2.45	2.45
85 - 89	.45	.73
90 & Over	.00	.09

STATE DEPARTMENT OF HEALTH - DEATH RECORDS

CHART 3

Average Number of Deaths from Tuberculosis
By Sex and Age Groups - Nebraska 1926-1936



STATE DEPARTMENT OF HEALTH - DEATH RECORDS

TABLE 8

Eleven-year Average Number of Deaths and Death Rates Per 100,000 Population From Tuberculosis

By Sex and Age

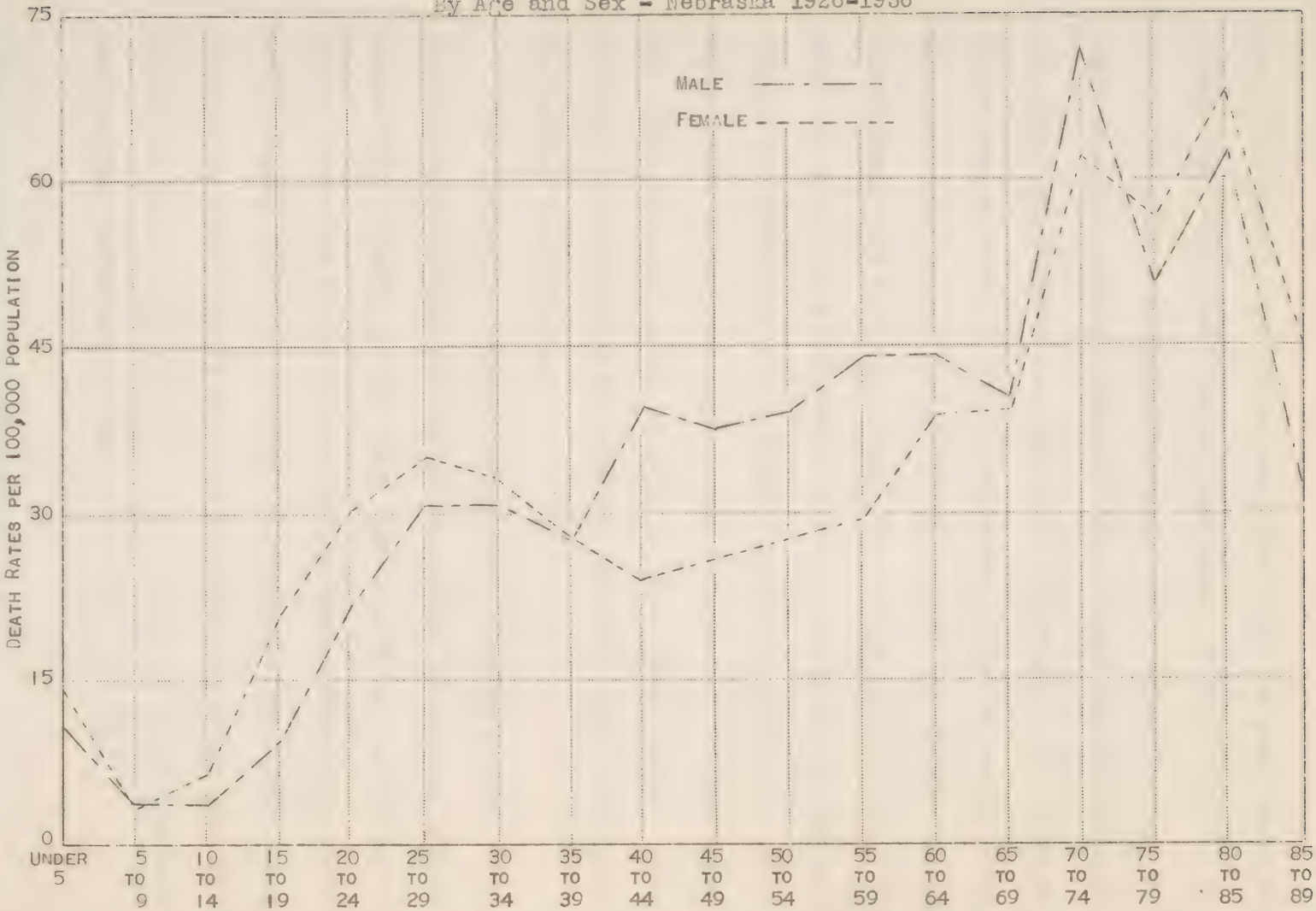
Nebraska 1926 - 1936

	[1]Population			[2]Average Number of Deaths			Death Rates		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
All Ages	1,377,883	706,548	671,015	338.5	176.0	162.5	24.7	26.5	24.2
Under 5	130,337	66,742	63,595	16.5	7.4	9.2	12.7	11.1	14.5
5 - 9	141,487	71,931	69,556	5.4	3.0	2.4	3.8	4.2	3.5
10 - 14	136,339	69,173	67,166	8.0	3.4	4.6	.6	4.9	6.8
15 - 19	132,100	66,788	65,312	21.1	7.3	13.8	16.0	10.9	21.1
20 - 24	120,788	60,298	60,490	32.1	13.5	18.6	26.6	22.4	30.7
25 - 29	104,370	52,163	52,207	34.9	16.5	18.5	33.4	31.6	35.4
30 - 34	99,601	50,023	49,578	32.3	15.5	16.8	32.4	31.0	33.9
35 - 39	99,811	50,976	48,835	28.5	14.4	14.1	28.6	28.2	28.9
40 - 44	89,856	46,204	43,204	29.1	18.7	10.4	32.4	40.1	24.1
45 - 49	76,815	40,125	36,690	25.3	15.5	9.7	32.9	38.6	26.4
50 - 54	64,691	34,386	30,305	22.4	13.8	8.5	34.6	40.1	28.4
55 - 59	52,041	27,577	24,464	19.5	12.2	7.3	37.5	44.2	29.8
60 - 64	42,783	22,815	19,968	17.9	10.1	7.8	41.8	44.3	38.1
65 - 69	34,431	18,632	15,799	14.0	7.7	6.3	40.7	41.3	39.9
70 - 74	25,525	13,993	11,532	17.3	10.1	7.2	67.8	72.2	62.4
75 - 79	14,834	7,825	7,009	8.0	4.0	4.0	53.9	51.1	57.1
80 - 84	7,583	3,944	3,639	5.0	2.5	2.5	65.9	63.4	68.7
85 - 89	3,032	1,512	1,520	1.2	.5	.7	39.6	33.1	46.1
90 & Over	789	360	429	.1	.0	.1	12.7	.0	23.3
Unknown	750	433	317	.3	.3	.0	40.0	69.3	.0

Source of Information: [1]United States Census, 1930
[2]Death Records, (State) Department of Health

CHART 4

Tuberculosis Death Rates per 100,000 Population
By Age and Sex - Nebraska 1926-1936



SOURCE OF INFORMATION: (STATE) DEPARTMENT OF HEALTH AND FIFTEENTH CENSUS, UNITED STATES

ages of 10 and 35. The death rates for girls and young women is higher than that for boys and young men. In the 35 to 39 age group the rates are about the same, while after that age the death rate for males is generally higher than that for females. This ratio in death rates for males and females in Nebraska is the same as that for the United States. The following quotation concerning tuberculous deaths by age and sex in the United States bears out this statement: "In the age group 15 to 19 the rate for girls is almost twice that for boys, and in the succeeding age group, 20 to 24, young women have a death rate from tuberculosis 44 per cent higher than young men of the same ages. Not until the age period 30 to 34 do the rates for the sexes equalize, and thereafter the rate for males is higher throughout the rest of the life span.

"The disparity between death rates of young men and young women deserves special consideration because it is only within comparatively recent years that the variation has become so great. According to the figures of the Metropolitan Life Insurance Company, prior to 1915 the tuberculosis death rate among young women aged 20 to 24 was less than that for young men. With 1915 there began a reversal of the sex incidence of tuberculosis and this has become more marked as time has gone on."[1]

[1] Facts and Figures About Tuberculosis, 1931, Jessamine S. Whitney, National Tuberculosis Association.

The Tuberculosis death rate has declined over a period of years, but the decline for young men has been more rapid than that for young women. The decline in deaths and death rates for males and females from 1926 to 1936 is shown in Tables 9 and 10. These comparisons are shown in Chart 5 by age groups only.

TABLE 9

Tuberculosis Deaths by Sex and Age Groups

Nebraska 1926 to 1936

	1926		1927		1928		1929		1930		1931		1932		1933		1934		1935		1936	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
All Ages	228	214	188	201	187	160	206	204	200	181	176	172	152	121	149	145	155	142	137	147	139	111
Under 5	12	13	9	14	8	6	12	11	4	12	7	7	3	3	5	5	7	11	5	11	9	8
5 - 9	4	1	5	1	3	5	2	1	6	3	3	3	3	1	2	2	3	6	0	3	2	0
10 - 14	3	6	6	6	3	9	3	2	4	8	3	3	2	3	5	4	1	3	3	6	4	1
15 - 19	12	19	4	18	4	14	13	20	12	12	8	12	5	6	4	16	6	8	6	14	6	13
20 - 24	24	25	21	18	16	20	14	26	17	19	10	21	10	17	8	11	9	16	13	18	6	14
25 - 29	21	29	21	25	15	18	16	23	19	22	26	17	14	10	14	19	11	9	13	19	11	12
30 - 34	18	25	16	25	13	15	17	19	17	15	15	18	14	19	17	16	15	10	19	12	9	11
35 - 39	18	14	19	18	17	8	18	24	19	12	8	19	13	8	14	14	13	17	10	11	9	10
40 - 44	27	15	20	14	27	12	14	6	20	8	24	9	15	9	14	13	11	10	18	6	16	12
45 - 49	13	13	11	9	15	10	23	11	13	12	19	16	15	5	15	11	13	7	17	8	17	8
50 - 54	18	18	10	11	10	11	13	13	18	11	13	5	15	8	14	7	20	5	11	10	10	3
55 - 59	13	16	11	4	14	4	18	8	11	14	7	10	10	4	10	5	15	7	14	3	11	5
60 - 64	15	4	11	8	11	10	9	15	9	6	8	9	12	6	9	6	10	8	7	10	10	4
65 - 69	6	7	10	6	10	8	15	6	10	7	5	7	9	4	6	4	3	11	3	5	8	4
70 - 74	15	5	9	15	10	8	9	11	15	11	13	6	6	3	5	5	13	7	10	5	6	3
75 - 79	6	2	3	4	8	2	5	4	2	7	5	5	2	7	2	5	4	4	6	3	1	1
80 - 84	3	1	1	4	2	0	3	4	4	1	2	4	4	4	4	2	1	3	1	2	2	2
85 - 89	0	1	0	1	0	0	2	0	0	1	0	1	0	4	1	0	0	0	1	0	1	0
90 & Over	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Unknown	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

Source of Information: Death Records, (State) Department of Health

TABLE 10

Tuberculosis Death Rates Per 100,000 Population

Nebraska 1926 and 1936

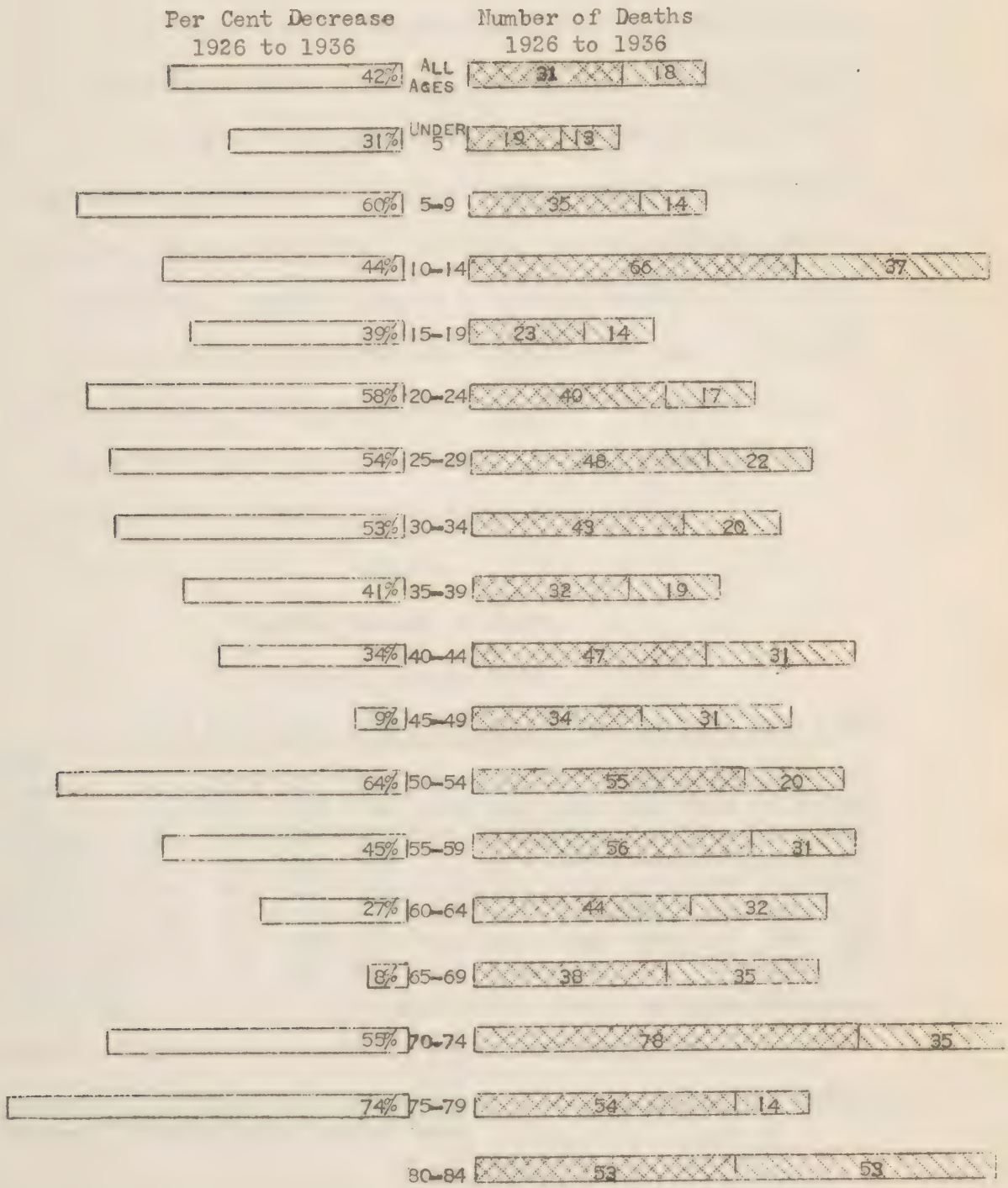
Age Groups	Death Rate Male 1926	1936	Per Cent Decrease	Death Rate Female 1926	1936	Per Cent Decrease	Death Rate Total 1926	1936	Per Cent Decrease
All Ages	32	20	39	30	16	46	31	18	42
Under 5	18	13	27	20	13	35	19	13	31
5 - 9	6	3	50	1	0	100	35	14	60
10 - 14	4	6	[1]50	9	1	89	66	37	44
15 - 19	17	9	47	29	19	34	23	14	39
20 - 24	39	10	74	41	23	44	40	17	58
25 - 29	40	21	48	55	23	58	48	22	54
30 - 34	36	18	50	51	22	57	43	20	53
35 - 39	35	17	51	28	20	28	32	19	41
40 - 44	58	34	41	34	28	18	47	31	34
45 - 49	32	42	[1]31	35	19	46	34	31	9
50 - 54	52	29	44	59	10	83	55	20	64
55 - 59	47	40	15	65	20	69	56	31	45
60 - 64	65	44	32	20	[1]20	0	44	32	27
65 - 69	32	45	[1]41	44	25	43	38	35	8
70 - 74	107	43	59	43	26	40	78	35	55
75 - 79	76	13	83	28	14	50	54	14	74
80 - 84	76	50	33	28	56	[1]100	53	53	0

Source of Information: Death Records - (State) Department of Health

[1]Increase

CHART 5

Reduction in Tuberculosis Death Rates per 100,000 Population in Nebraska
By Age Groups



SOURCE OF INFORMATION: (STATE) DEPARTMENT OF HEALTH - DEATH RECORDS

Comparison of Tuberculosis with Other Diseases

In the United States as a whole, statistics assembled by the National Tuberculosis Association[1] show that tuberculosis caused a greater number of deaths than any other disease until the year 1912, when it was exceeded by the number of deaths from heart disease. Later, pneumonia, nephritis, cancer, and cerebral hemorrhage caused more deaths. By 1929, tuberculosis had dropped from first to seventh place as a cause of death.

In Nebraska the tuberculosis death rate has also been rapidly declining, while the death rates from six other causes have risen above that of tuberculosis. In 1936 tuberculosis also ranked seventh as the cause of death in Nebraska.

TABLE 11

Leading Causes of Death

Nebraska 1926 - 1936

	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
Heart Disease	1450	2125	2415	2335	2255	2261	2277	2186	2165	2294	2581
Cancer	1198	1257	1327	1347	1438	1420	1424	1432	1545	1511	1569
Apoplexy	1165	1266	1213	1231	1199	1192	1296	1348	1354	1381	1240
Pneumonia	1085	769	1061	857	929	804	869	993	1036	1082	998
Nephritis	666	648	705	750	835	976	1014	810	837	714	963
Diabetes	224	273	300	301	291	303	321	229	280	280	342
Tuberculosis	441	400	357	425	348	355	280	303	307	306	253
Automobile Accidents	151	194	203	269	294	290	290	198	277	296	320

Source of Information: (State) Department of Health

[1] FACTS AND FIGURES ABOUT TUBERCULOSIS, 1931. Jessamine S. Whitney, National Tuberculosis Association.

Chart 6 gives the trend of deaths for tuberculosis and other principal causes of death in Nebraska. This is only part of the story, however. The other part is shown by Table 12 and Chart 7.

TABLE 12

Ten-year Average Number of Deaths from Leading Causes by Age Groups

Nebraska 1926 - 1935

Age	Heart Disease	Cancer	Cerebral Hemorrhage	Nephritis	Tuber-culosis	Pneu-monia
Under 5	13.5	4.6	3.0	5.9	18.0	205.2
5 to 9	11.3	2.2	.6	4.3	5.6	15.8
10 to 14	15.0	2.1	.7	4.6	8.1	11.1
15 to 19	19.7	6.0	1.1	5.8	21.7	14.9
20 to 24	16.4	5.3	1.1	9.1	34.0	15.2
25 to 34	44.0	24.8	4.3	18.9	68.0	40.7
35 to 44	86.5	95.0	24.6	41.0	63.9	53.0
45 to 54	208.4	171.8	70.6	74.5	51.0	62.8
55 to 64	387.7	273.3	172.7	145.1	38.1	74.4
65 & Over	1582.5	646.1	793.6	583.8	47.9	362.0
Unknown	2.9	.4	.8	.5	1.3	1.0

Source of Information: Mortality Statistics, United States Census

CHART 6

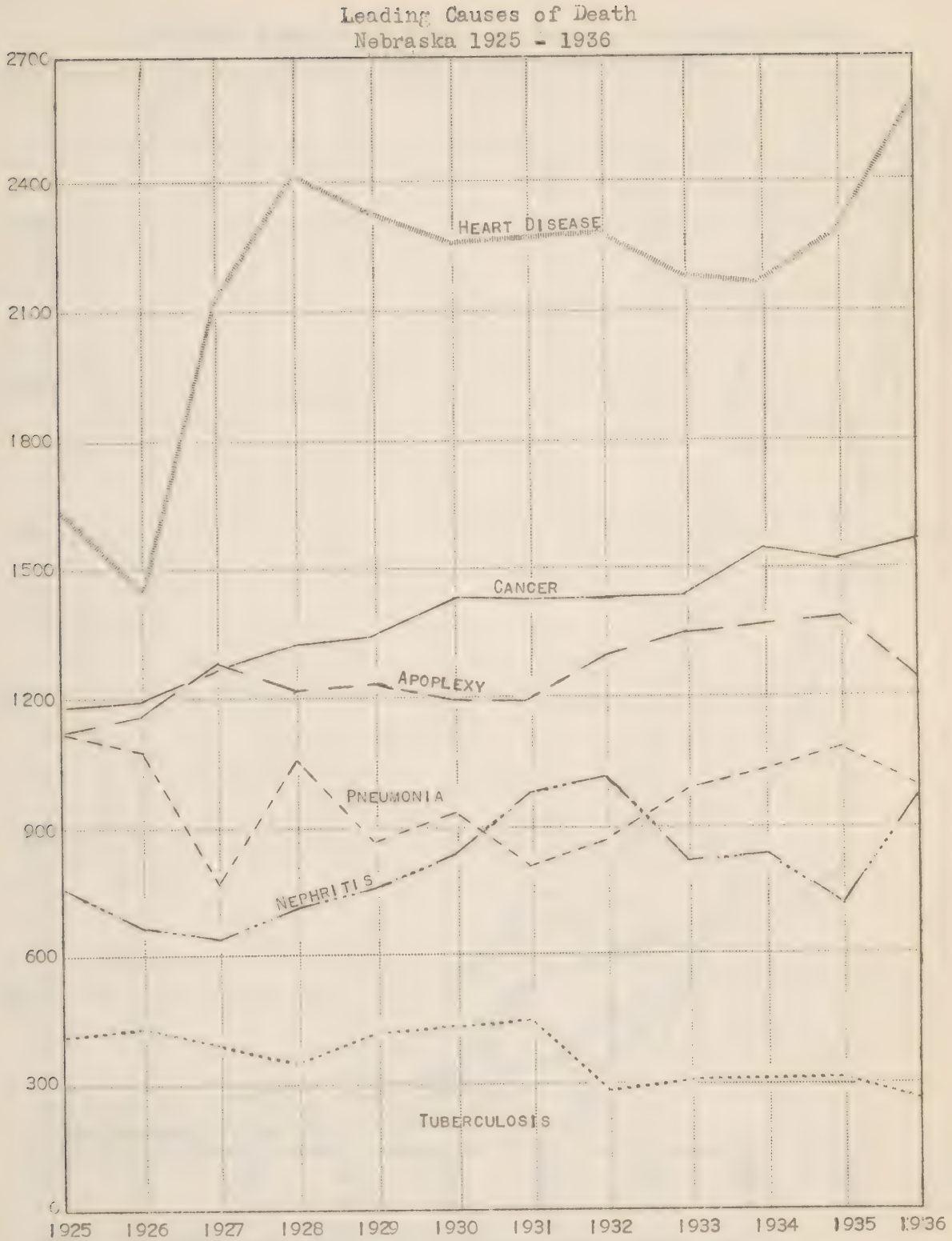
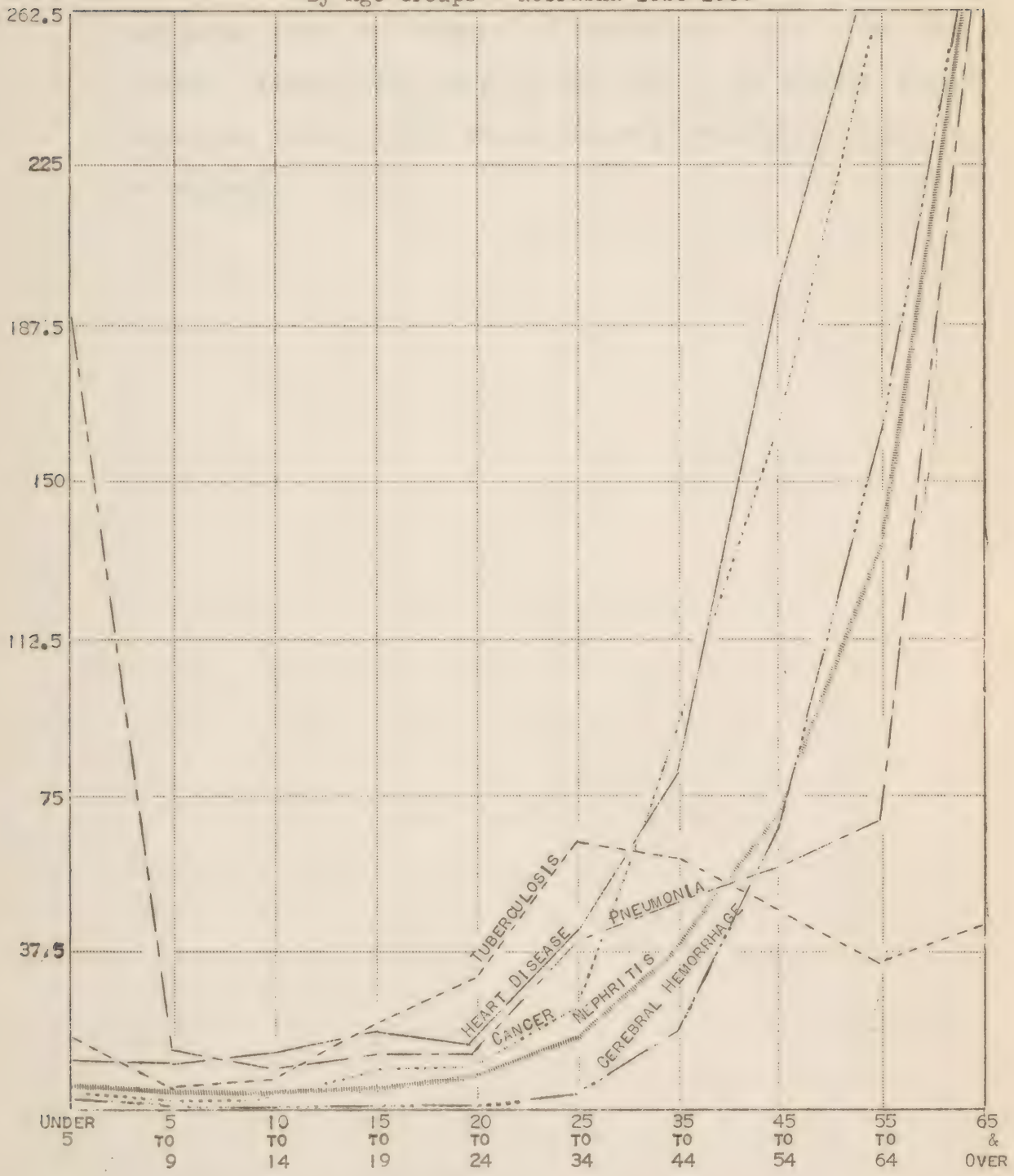

Leading Causes of Death
Nebraska 1925 - 1936
2700
2400
2100
1800
1500
1200
900
600
300
0
HEART DISEASE
CANCER
APOPLEXY
PNEUMONIA
NEPHRITIS
TUBERCULOSIS
1925
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
1936

CHART 7

Ten-Year Average of Number of Deaths from Leading Causes
By Age Groups - Nebraska 1926-1935



SOURCE OF INFORMATION: MORTALITY STATISTICS, UNITED STATES CENSUS

The distribution of deaths from those leading causes of death by age group gives us a picture of tuberculosis that is very important. Tuberculosis does its work during the earlier ages, during the prime of life, when a person's productivity should be at the peak.

II

COUNTY TUBERCULOSIS SURVEYS

York County was the first county to respond with complete returns on the questionnaires. With this response came a request that a detailed survey be started in the county for the purpose of discovering every positive reactor through skin tests, of determining every active case through X-raying the positive reactors, of attempting to make it possible to assure adequate treatment for each patient, as well as protection to the general public in a united struggle to control tuberculosis.

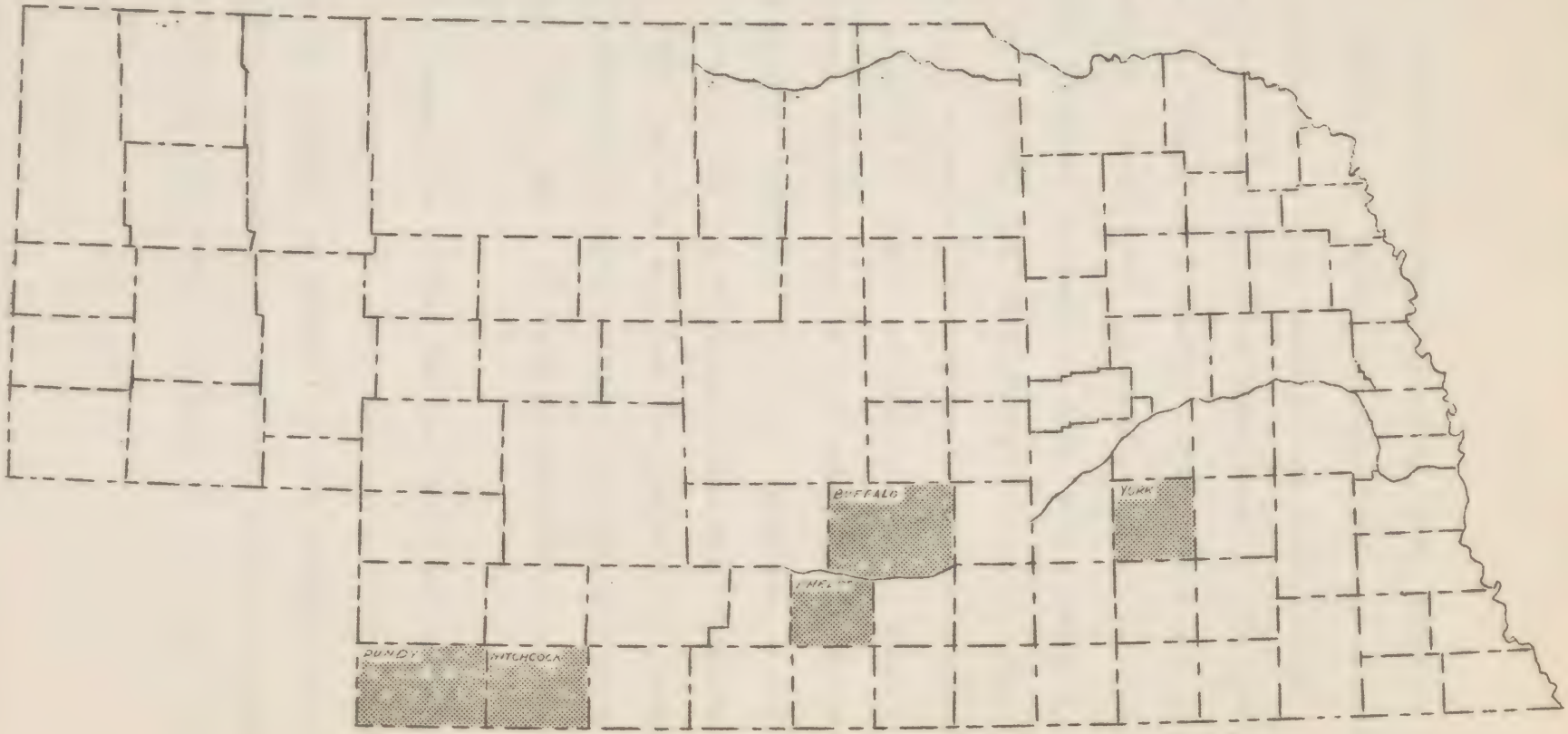
The York County Tuberculosis Survey was started in the fall of 1936. This survey conducted through the schools, was the first of its kind ever attempted, and because it was so successful, the plan is being adopted elsewhere throughout the country.

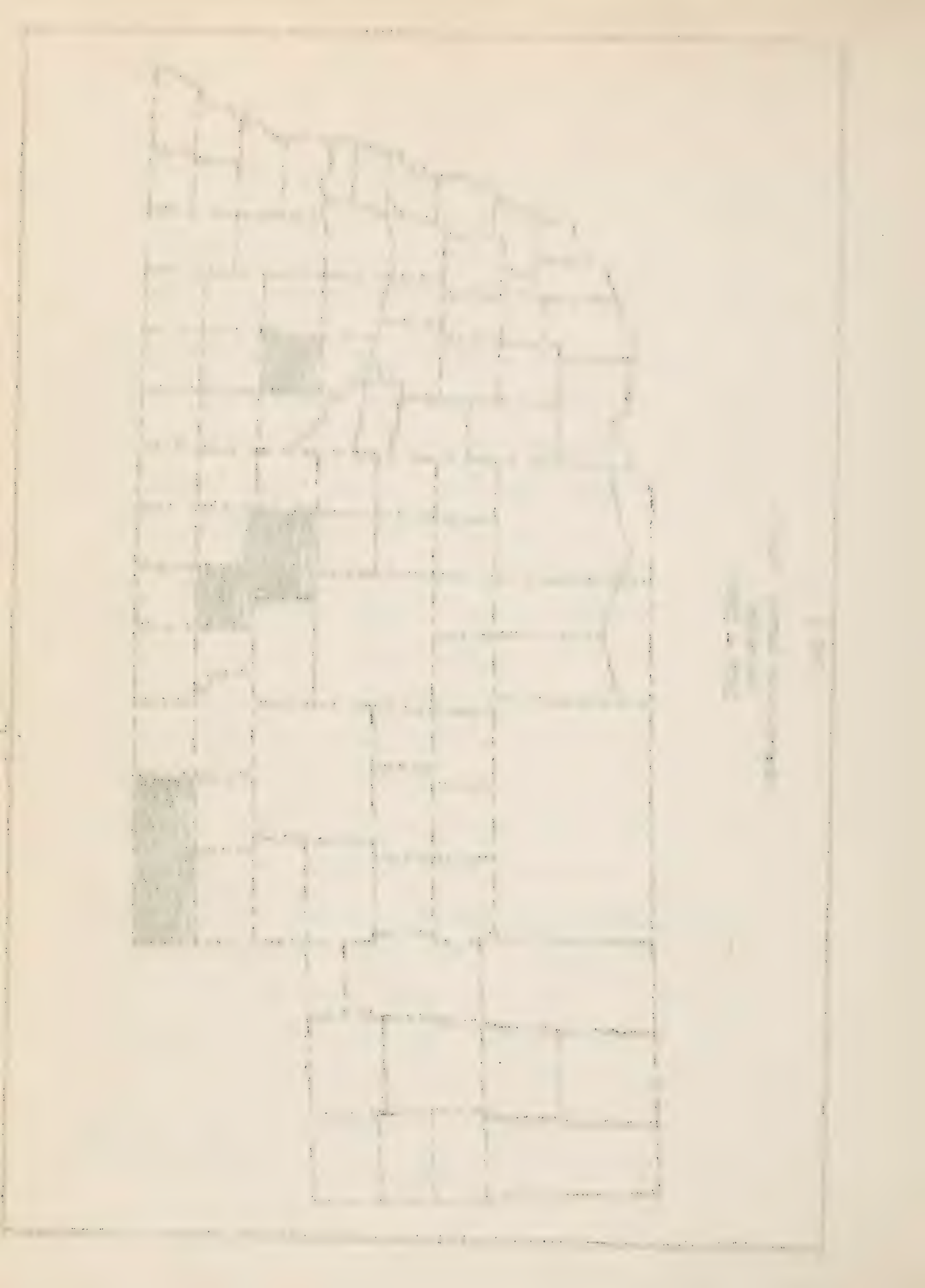
Wide publicity was given the survey in an article in the January Bulletin of the National Tuberculosis Association which tells of the campaign -- "York County, Nebraska, has the unique distinction of being one of the few counties in the United States, if not the only one where there is a reasonable prospect of achieving a complete control of Tuberculosis."

In the March number of the Journal of the American Medical Association we find the following comments: "Thus the first step

MAP 4

Tuberculosis Survey Counties
Nebraska
1936 - 1938





toward the conquest of tuberculosis has been taken in York County by acquisition of highly accurate knowledge of existing foci of the disease. A sound basis for the intensive and economical control and eradication is established in this area."

After the Tuberculosis Survey in York County was practically completed, the Nebraska Unicameral Legislature appropriated fifteen thousand dollars to assist with surveys in other counties. This sum was made available July 1, 1937. Additional funds were to be raised by the counties to supplement this fund. The first counties to obtain the approval of the Tuberculosis Survey Advisory Committee were in this order, Phelps, Hitchcock, Dundy, and Buffalo counties. The work in Phelps County was started in January 1938 and continued to the other counties. By January 1, 1939, the work will have been practically completed in Phelps, Hitchcock and Dundy counties and well started in Buffalo County. (Note Map 4 for relative position of counties in the State.)

In this campaign to control and eventually to eradicate tuberculosis, the work in the field was carried on by a field supervisor and a nurse or nurses. It was divided into four stages: first, introduction and education, second, skin testing and study of case histories of previous tuberculosis deaths,

third, X-raying all positive reactors to skin tests and fourth, caring for all active cases.

The field workers worked in cooperation with the county medical societies on all technical and professional parts of the survey and with the County Board of Commissioners, organizations and clubs, and planning bodies, on the organization, financial support, and other problems of the survey's administration.

Procedure

The first stage, one of introduction and education, consisted of newspaper publicity, picture shows, and lectures by physicians. Three motion picture films, "The Story of My Life by Tee Bee", "Behind the Shadows", and "Contacts", were shown. The films were designed to appeal to all age groups. In this stage the fact that only a doctor can tell who has tuberculosis was stressed. In Illustration 1, (see following page) the faces of nine individuals are shown.

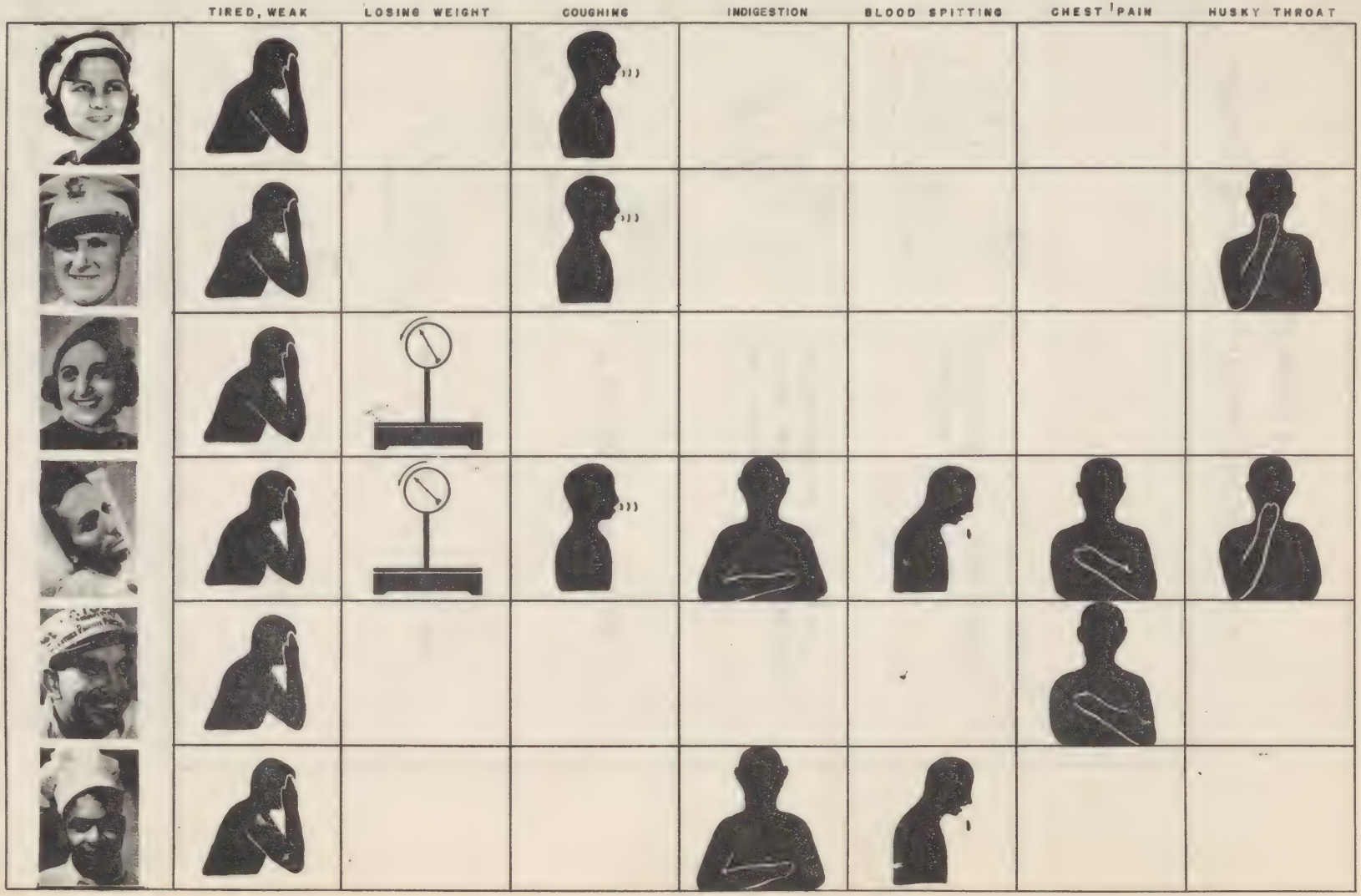
ILLUSTRATION I

CAN YOU TELL WHO HAS TUBERCULOSIS?

COURTESY OF NATIONAL TUBERCULOSIS ASSOCIATION

ILLUSTRATION 2

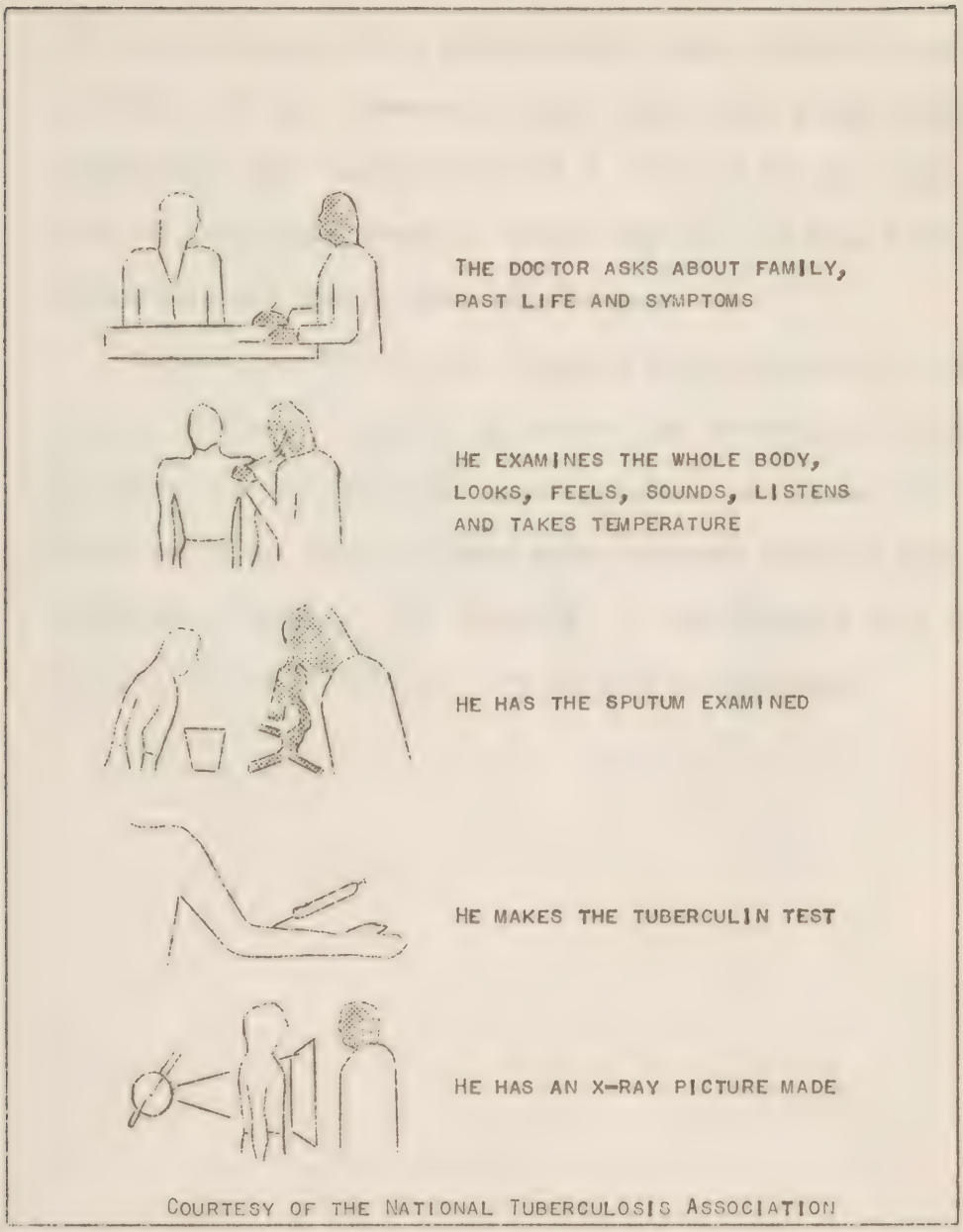
SYMPTOMS OF THE SICK ONES



COURTESY OF NATIONAL TUBERCULOSIS ASSOCIATION

ILLUSTRATION 3

Only the Doctor Can Tell Who Has Tuberculosis



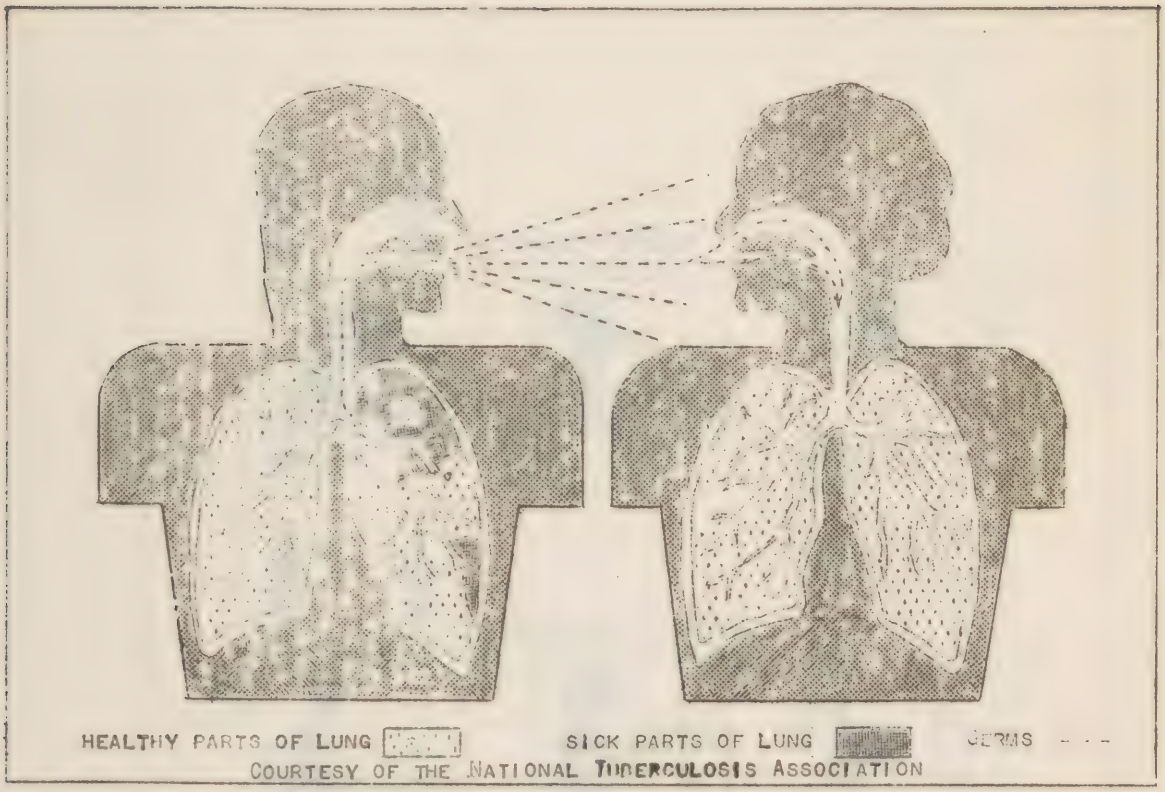
Four of the steps taken by a doctor to determine that six of the nine people had tuberculosis are shown above in Illustration 3.

After the introductory and educational work was completed, the second stage of the campaign was begun. Skin testing clinics were set up. Tuberculin skin tests were given to all those individuals who volunteered, at a cost of 25¢ per test. Whenever an individual reacted positively to the skin test, all the members of his family were skin tested.

To complete the second stage in this campaign, an examination of the case records of deaths from tuberculosis which have occurred in the counties over a period of eleven years (1926-1936) was made. These records were obtained from the (State) Department of Health. All contacts of the deceased were asked to be skin tested if they had not already volunteered.

ILLUSTRATION 4

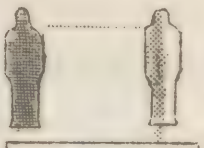
Tuberculosis Germs Get From One Body Into Another



This included all who lived, worked, visited or came in contact with the case in any other way. From Illustrations 4 above and 5 on the following page, the ease with which an infected person can infect another and another is clearly shown.

ILLUSTRATION 5

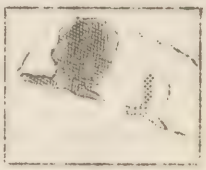
Tuberculosis Germs are Passed from Person to Person in Many Ways



BY DIRECT CONTACT

KISSING

COUGHING - SNEEZING



SLEEPING IN ONE BED

BY INDIRECT CONTACT

PLAYING WHERE OTHERS HAVE SPAT

COMMON USE OF PERSONAL THINGS

COMMON USE OF EATING UTENSILS

ANYTHING WHICH TOUCHES THE LIPS OF A PERSON WHO HAS TUBERCULOSIS MAY CARRY THE GERMS TO ANOTHER

COURTESY OF THE NATIONAL TUBERCULOSIS ASSOCIATION

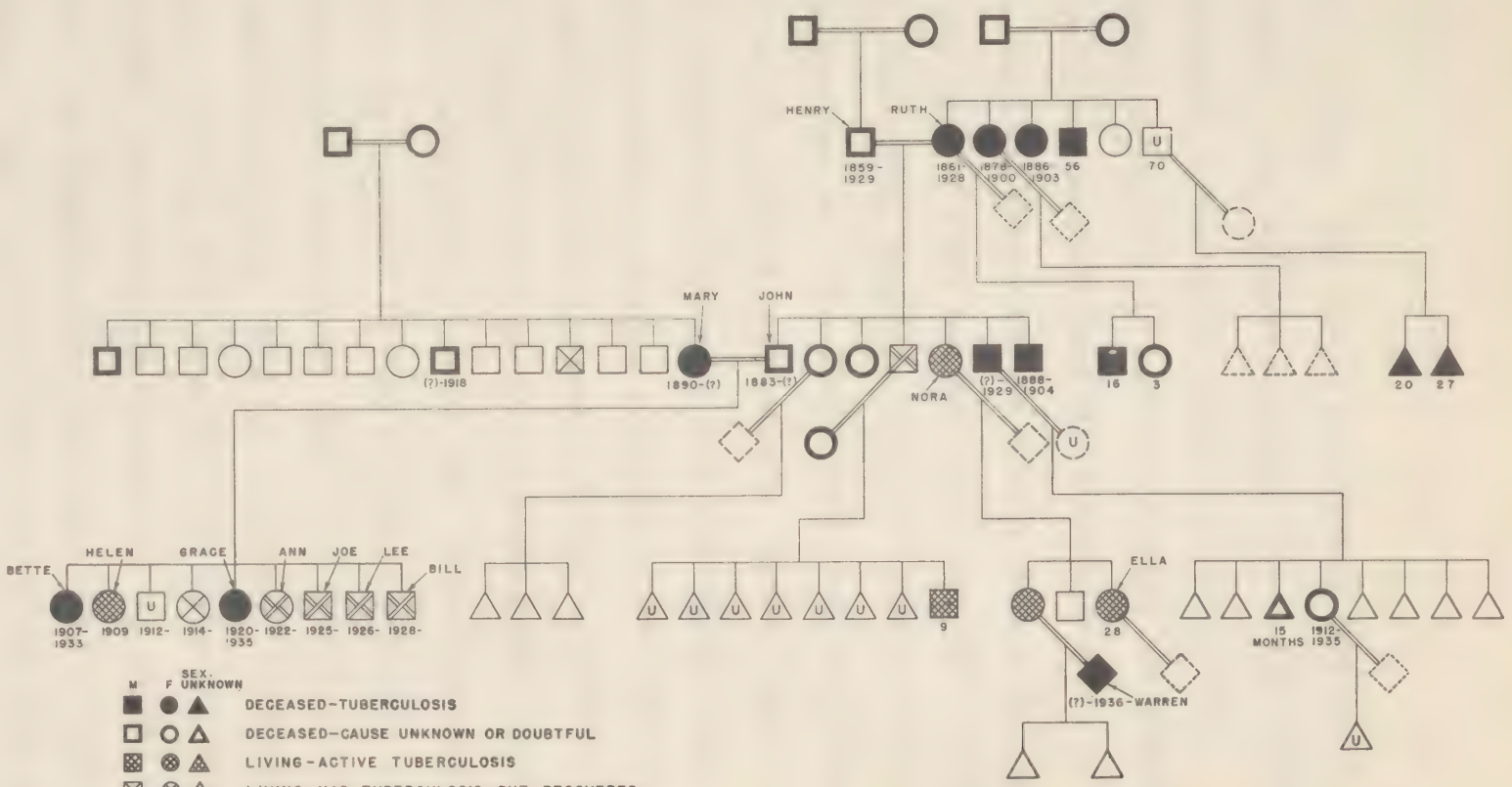
In the third stage, each person reacting positively to the tuberculin skin test was X-rayed to determine whether he was then an active case of tuberculosis. All contacts of the positive reactors were requested to report for a skin test and an X-ray examination, if the skin test reacted positively. When an X-ray revealed signs of infection from the disease the degree of infection was determined by the doctor. Two plans were then followed. The patient was asked to report for periodic examination or arrangements were made to segregate the case for proper treatment and to prevent infection to other people. This is the fourth and final stage. It also included an examination of all contacts of the active case if they had not already reported for examination.

The value of a complete tuberculosis case finding survey in Nebraska can best be brought home by a study of Illustration 6, if it is kept in mind that the inclusion of one member of a large group in one of the skin testing clinics would probably result in the bringing of the entire group under observation and treatment.

This actual case history, Illustration 6, of a Nebraska family infected with tuberculosis has been traced. There is no definite record to show that Henry's or Ruth's ancestors were infected. The cause of their deaths is not actually known. Two

ILLUSTRATION 6

ACTUAL CASE HISTORY OF A NEBRASKA FAMILY INFECTED WITH TUBERCULOSIS 1938



NOTE: DATES UNDER SYMBOLS REPRESENT DATE OF BIRTH AND DATE OF DEATH OF INDIVIDUAL. IF THESE DATES ARE NOT AVAILABLE, THE NUMBERS UNDER SYMBOLS REPRESENT AGE AT TIME OF DEATH OR AGE TODAY.

SOURCE – NEBRASKA TUBERCULOSIS ASSOCIATION

NEBRASKA STATE PLANNING BOARD

W.P.A. O.P. NOS. 165-81-6999 AND 465-81-3-155

of Ruth's sisters and one of her brothers died of pulmonary tuberculosis. Both children of Ruth's only living brother died of tuberculosis at the ages of twenty and twenty-seven.

Ruth, herself, died in 1928 of pulmonary tuberculosis. A son by her first marriage died with tuberculosis at the age of sixteen. Ruth and Henry were the parents of four sons and three daughters. Two of these daughters died; the cause of death was unknown. The living daughter, Nora, has active tuberculosis, her two daughters also have active tuberculosis and Warren, the husband of one, died of tuberculosis. Nora's daughter, Ella, after an examination, upon being told that she had tuberculosis, refused to believe it, and has not returned for further examination. Ruth's one living son shows symptoms of tuberculosis and his nine year old son is now in a sanatorium with tuberculosis. Of Ruth's three sons who are dead, two died of tuberculosis and John, who was examined in 1936 but who is now dead, showed no symptoms of the disease at the time of the examination.

John's wife, Mary, died of pulmonary tuberculosis. Of their nine children, four sons and five daughters, the oldest, born in 1907, three sons show symptoms and one son has not been examined. Two daughters, Grace and Bette, died of pulmonary tuberculosis. Helen has active tuberculosis, Ann shows symptoms,

and Irene has had tuberculosis and recovered. Bette took care of her grandmother, Ruth, one year before her grandmother died. Bette may have been infected by her grandmother and in turn infected Helen who is in a sanatorium today with active tuberculosis. Or, Bette may have been infected in 1914 when she had typhoid pneumonia and her mother, Mary, who suffered a severe hemorrhage at this time, took care of her.

If a tuberculosis survey had been carried on years ago, so that Ruth and Ruth's father, mother, brothers, and sisters could have been tested, the heavy toll of deaths in Ruth's family and their decendants could have been prevented, because tuberculosis in those people would have been uncovered in the incipient or beginning stages of the disease.

The tuberculosis survey now being carried on in Nebraska explains tuberculosis to school children and their parents, locates such children as Lee, Joe, Ann, and Bill, through skin testing clinics and a follow-up of family case histories. X-rays are taken of positive reactors; the inactive positive reactors are urged to report to their family physicians for periodic examinations, and the active positive reactors segregated in hospitals and sanitoriums for treatment and cure.

Introduction and Education

Many educational meetings were held in the survey counties to explain the purposes of the survey. The meetings usually consisted of talks by the doctors, the field supervisor and the showing of sound films. The location of the meetings and the number of people attending are summarized by counties as follows:

York County - Twenty-six hundred people attended meetings. Meetings were held with the students of York High School, School Board and teachers, the York community, two Parent-Teacher Associations, York College, St. Ursula's Convent and School, and with the communities of Benedict, Thayer, Gresham, Henderson, McCool, Bradshaw, and Waco.

Phelps County - Thirteen hundred three people attended meetings. Meetings were held in Holdrege, Funk, Atlanta, Loomis, and Sacramento.

Dundy County - Ten hundred sixty-five people attended meetings. Meetings were held in Benkelman, Haigler, Max, and Parks.

Hitchcock County - Eleven hundred twenty-five people attended meetings. Meetings were held in Palisade, Trenton, Stratton, Beverly, and Culbertson.

Many interviews were made regarding the work with responsible officials in every community. Newspapers were given de-

tailed accounts of the program to be carried out. Literature was also distributed through the schools and at the meetings.

Skin Testing Clinics and X-ray Examinations

The work was always carried on in the several communities of the counties. The towns and number of rural districts where tests were held are listed by counties. The results of the skin test and X-ray diagnosis, and other pertinent data were recorded on forms provided for the purpose.[1]

York County - York, Benedict, Gresham, Henderson, Lushton, Waco, Thayer, and McCool.

Phelps County - Holdrege, Loomis, Atlanta, Orphanage, Funk, Bertrand, and 2 Rural Districts.

Dundy County - Max, Benkelman, Parks, Haigler, Ough School, and 2 Rural Districts.

Hitchcock County - Palisade, Trenton, Stratton, Beverly and Culbertson.

The following table is a summary of all persons who were skin tested in York, Phelps, Dundy, and Hitchcock counties. The bar graph following the table illustrates the results.

[1]Form E - Appendix

TABLE 13

Summary of all Persons Skin Tested and X-rayed
in Survey Counties

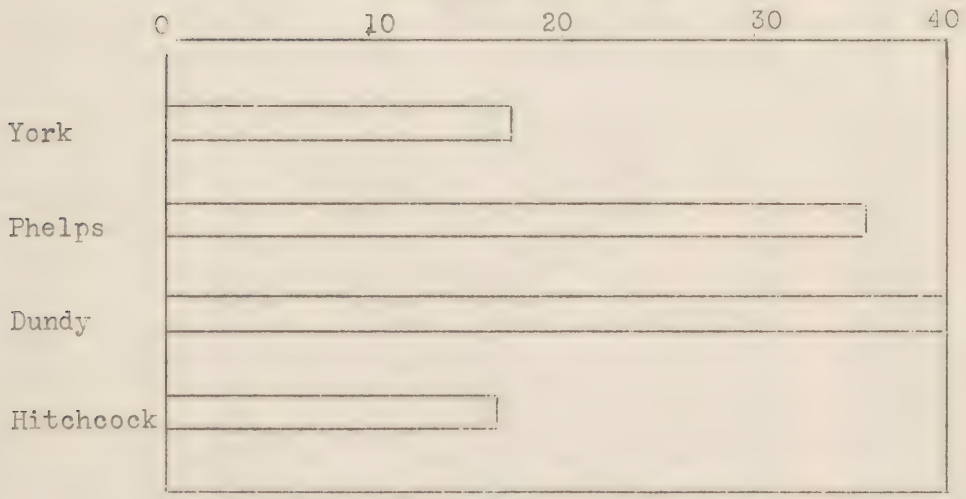
Nebraska 1936-1938

Counties	Population by Counties	Number Skin Tested	No. of Positive Reactors	Per Cent Positive Reactors	Number of X-rays
York	17239	3687	692	18.7	586
Phelps	9261	2528	888	35.1	605
Dundy	5610	1671	658	40.5	537
Hitchcock	7269	1779	322	18.1	289
*Buffalo	12480	2124	203	9.0	181
Totals	51859	11789	2763	23.4	2198

CHART 8

Percentage of Reactors
in Survey Counties

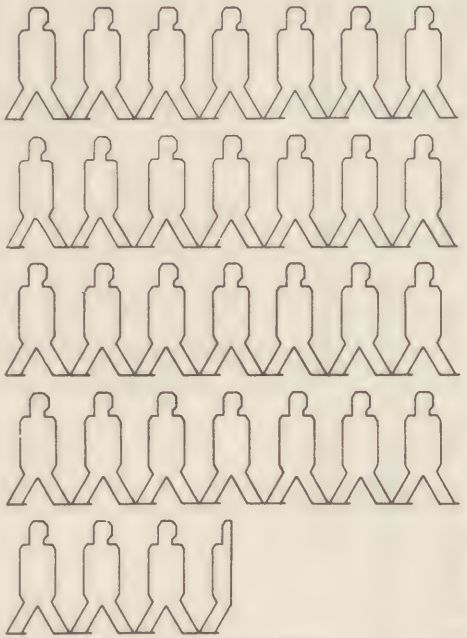
Nebraska 1936-1938



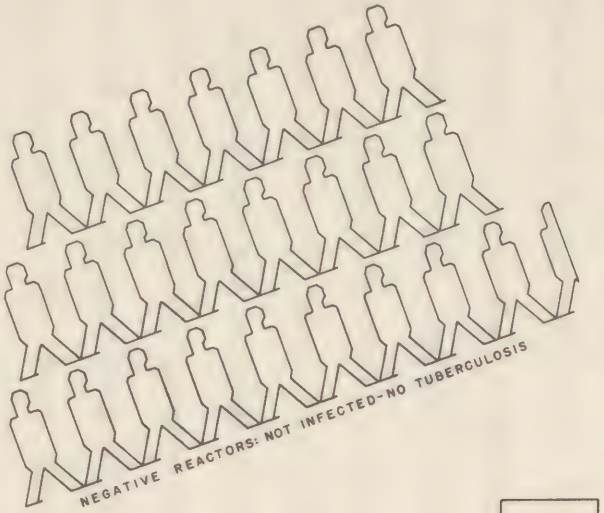
*The results of Buffalo County are not included in any tables, illustrations, or charts that follow in this report because the Survey is not completed in this county.

ILLUSTRATION 7

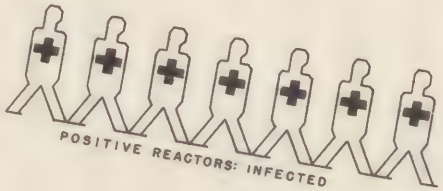
TUBERCULIN TEST AND X-RAY FIND EARLY SYMPTOMS OF TUBERCULOSIS



THESE PEOPLE TAKE THE TEST



NEGATIVE REACTORS: NOT INFECTED-NO TUBERCULOSIS



POSITIVE REACTORS: INFECTED

NO SIGNS OF DISEASE FOUND:
INFECTION OVERCOME

X-RAY EVIDENCE SHOWS PERSONS NEED WATCHING. A FEW HAVE SERIOUS DISEASE, NEED TREATMENT.

EACH FIGURE REPRESENTS 300 PEOPLE TESTED IN NEBRASKA SURVEY COUNTIES, YORK, PHELPS, DUNDY AND HITCHCOCK 1936-1938

THE TUBERCULIN TEST SHOWS WHO IS INFECTED

THE X-RAY SHOWS HOW MUCH DAMAGE, IF ANY, HAS BEEN CAUSED BY INFECTION

NEBRASKA STATE PLANNING BOARD

The number of males and females skin tested for tuberculosis in the survey counties are about the same. Table 14 and Chart 9 reveal this fact. The chart also shows the small number of people tested in certain age groups. The small samplings appear in the age group below 5 and the age groups above 60. Approximately 73 per cent of all the people tested are in the age groups of 5 to 20. A further break down is made to illustrate more fully what grades this large group represents and what the occupations were of the people not in school. It is important to note in Table 15 and Charts 10 and 11, that there are comparatively few reactors in the school children. The housewife, the farmer and the laborer are all heavily infected. Charts 12 and 13 shows the per cent of infection for these grades and these occupations. The same general trend is noticeable for each county. The percentage, for all counties together, varies from 10 per cent in the grades to 52 per cent for the adults. The highest percentage for adults is among the housewife. This is a wide variance and should be conclusive proof that more work might be concentrated in certain groups.

TABLE 14

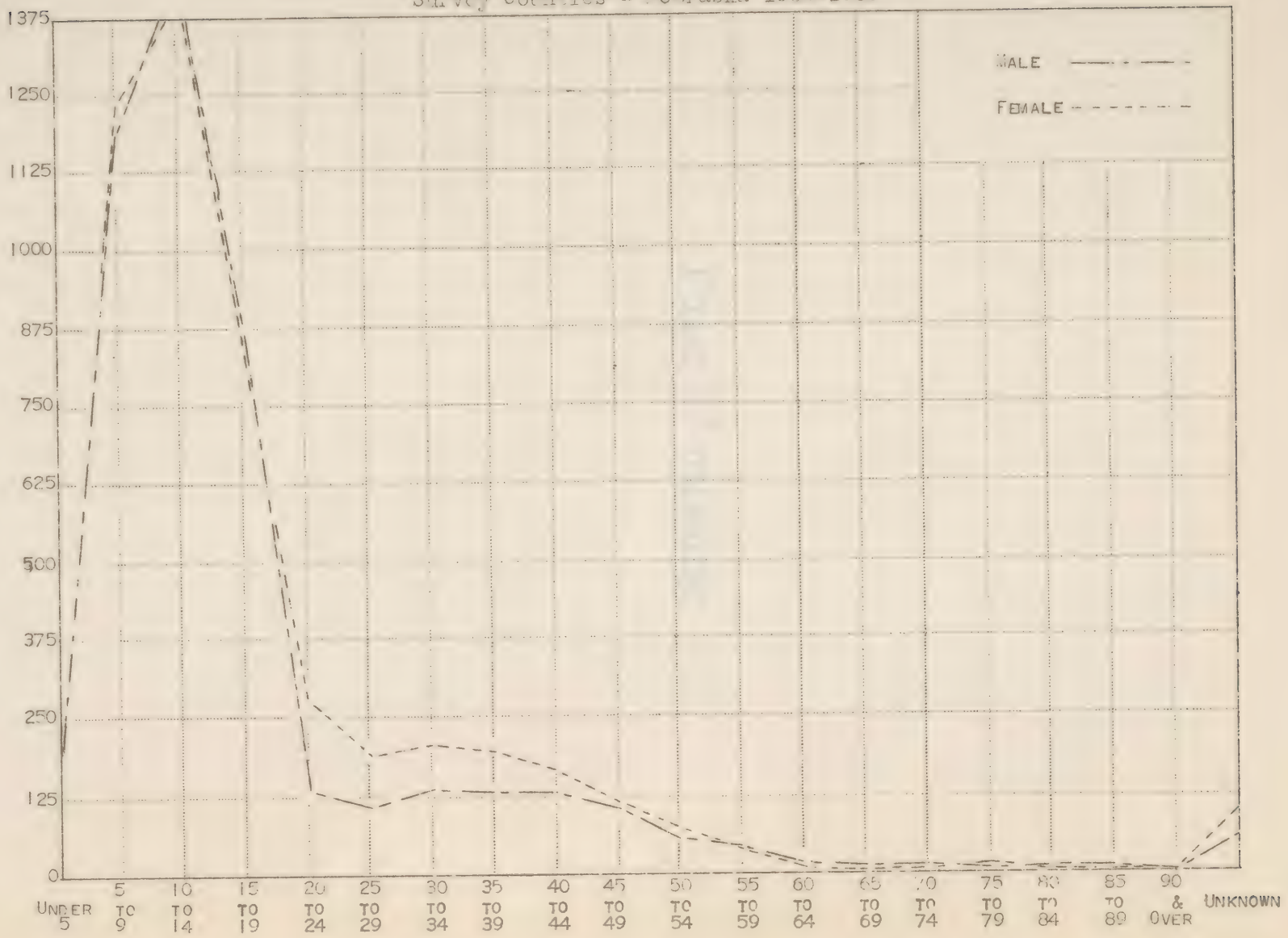
Number of People Skin Tested for Tuberculosis in Survey Counties
by Sex and Age

Nebraska 1936 - 1938

County		Under 5	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 & Over	Unk.
York	Male	47	443	564	377	62	36	48	43	32	30	17	14	5	1	1	1	1	0	0	48
	Female	35	445	576	350	118	64	70	46	50	35	24	12	3	2	2	4	0	0	0	81
Phelps	Male	62	304	357	211	34	31	46	37	39	41	27	11	5	5	4	0	0	0	0	1
	Female	57	285	338	208	83	58	62	68	60	38	20	19	4	1	1	1	0	0	0	10
Dundy	Male	53	193	231	118	24	24	14	22	31	21	8	10	4	1	1	1	0	0	0	0
	Female	45	212	250	149	37	33	45	43	42	20	17	11	4	1	1	0	1	0	0	4
Hitchcock	Male	29	246	291	162	16	17	25	27	27	14	11	8	3	2	2	0	0	1	0	3
	Female	31	239	242	162	42	35	36	41	18	24	11	4	2	1	2	0	0	0	0	5
Total	Male	191	1186	1443	868	136	108	133	129	129	106	63	43	17	9	8	2	1	1	0	52
	Female	168	1181	1406	869	280	190	213	198	170	117	72	46	13	5	6	5	1	0	0	100

CHART 9

Number of People Skin Tested for Tuberculosis by Age and Sex
Survey Counties - Nebraska 1936-1938



Page 57 missing

CHART 10

Grade in School of Negative and Positive Reactors
Survey Counties - Nebraska 1936-1938

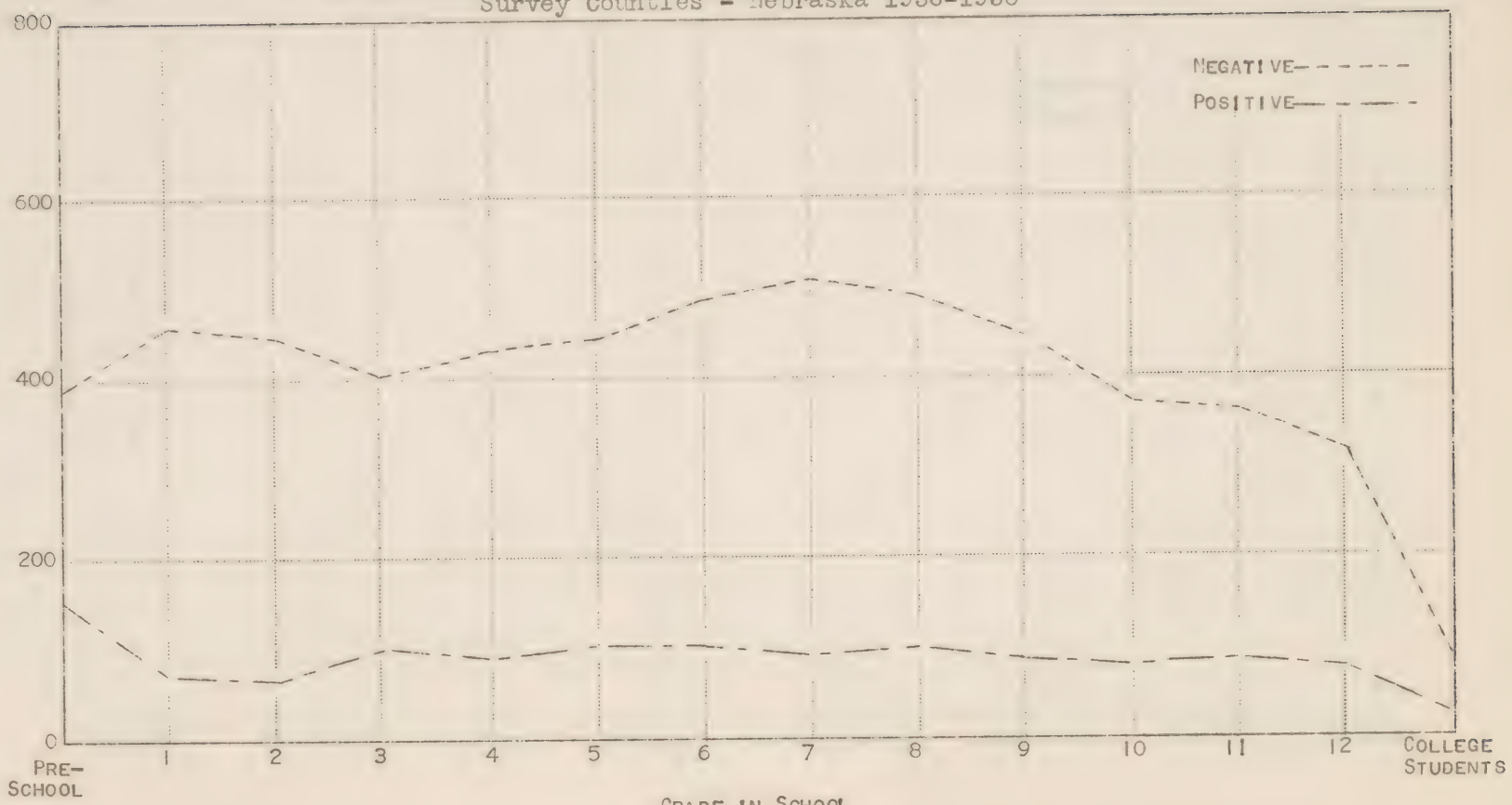


CHART 11

Occupation of Positive and Negative Reactors
Survey Counties - Nebraska 1936-1938

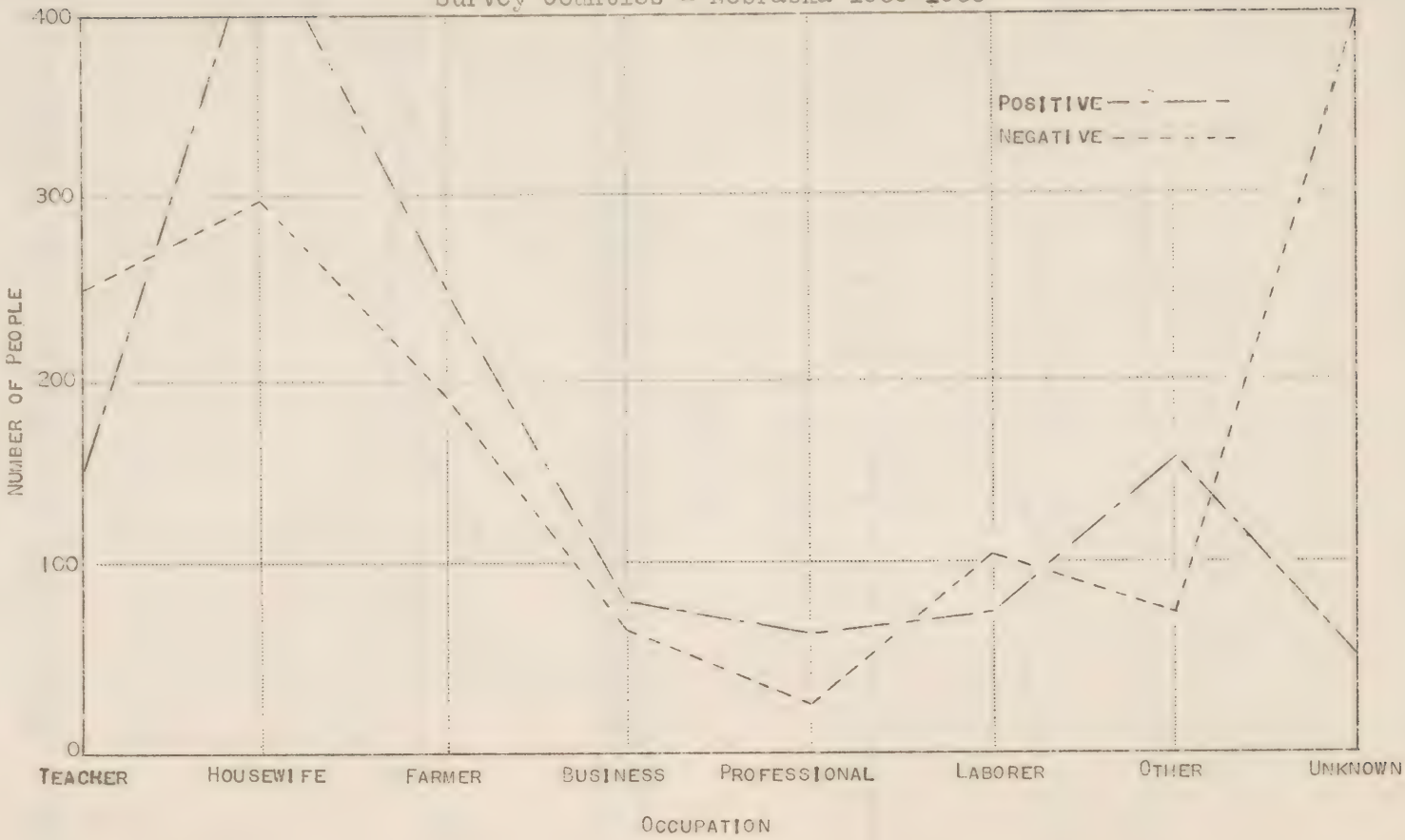


CHART 12

Percentage of Positive Reactors by Grade in School
Survey Counties - Nebraska 1936-1938

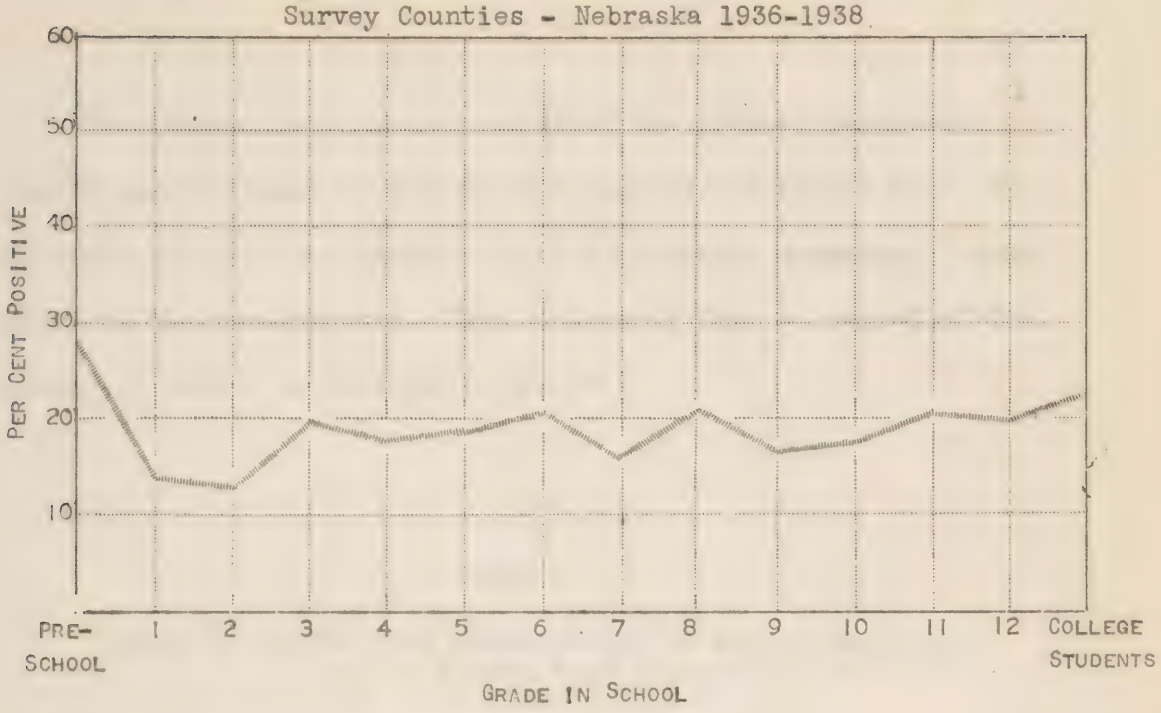
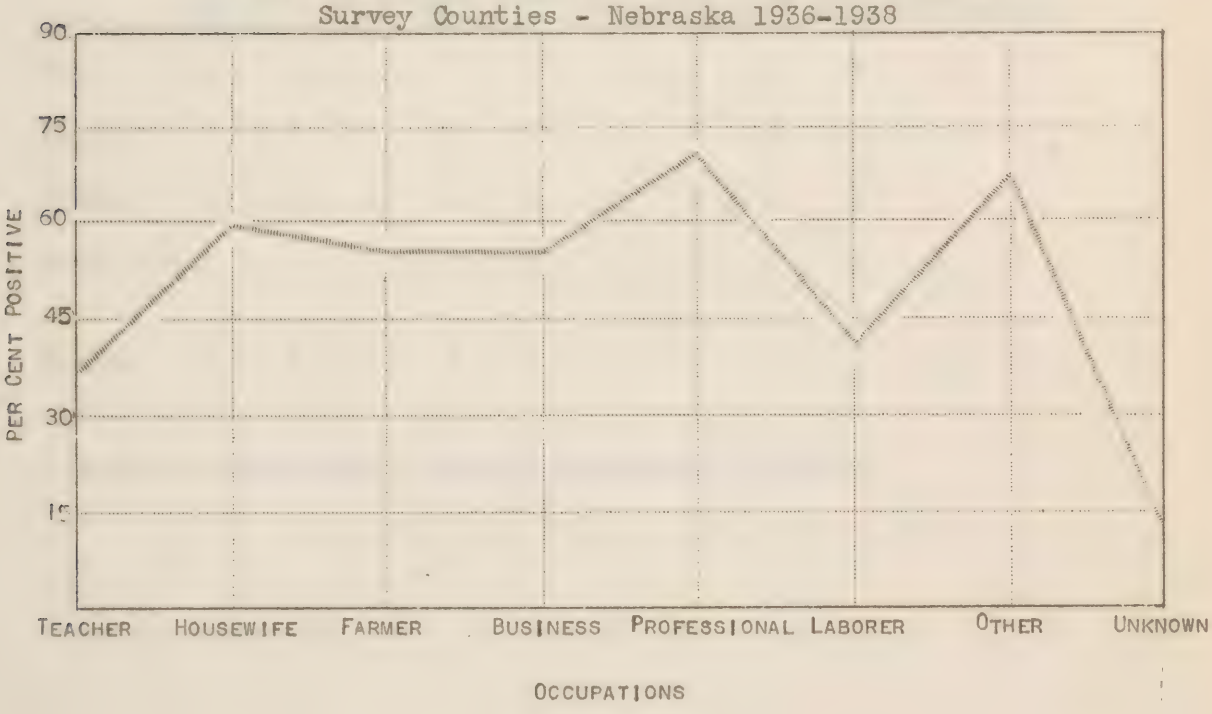


CHART 13

Percentage of Positive Reactors by Occupation
Survey Counties - Nebraska 1936-1938



The tuberculosis death records of the (State) Department of Health were reviewed by the field worker for an eleven year period and all case and family records[1] of these deceased were gathered and investigated. The following is a record of the number of deaths by counties by years.

TABLE 16

Number of Deaths From Tuberculosis in Survey Counties for an Eleven Year Period

Nebraska 1926 - 1936

	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
York	4	5	5	7	2	4	2	5	3	3	0
Phelps	2	3	0	0	1	0	1	0	0	1	1
Dundy	1	0	2	1	2	2	1	1	0	1	1
Hitchcock	1	0	0	0	1	0	2	0	0	0	0
Totals	8	8	7	8	6	6	6	6	3	5	2

Source of Information - (State) Department of Health

[1] Form F - Appendix

A large amount of evidence has been collected from the survey counties relating to the amount of infection in the schools and the general population. The number of children, as shown by totals in Table 17, are so small that the results cannot be considered as truly representative of conditions to be expected in these same age groups elsewhere in the State. This is particularly true in the youngest and oldest age groups. However, a few general indications are noticeable.

The amount of infection gradually increases during childhood and keeps on increasing until the 35 to 45 age groups and then it starts to decrease. Many children seem to become infected in the first year of their life. By the time the young people reach the age of twenty, 25 per cent of them are infected as shown by Table 17 and Charts 14, 15, 16, and 17. These charts also show the age groups in which large numbers were tested and that the resulting number of positive reactors were inversely proportional to the ages.

Chart 18 reveals the percentage of the people tested which reacted positively, by age groups and by counties. The same general results are noticeable in all four counties. The ratio of number of positive reactors to the number of negative reactors is low in the school age group and high for the ages of 25 to 60.

TABLE 17

Number of Negative and Positive Reactors with Per Cent Positive by Age Groups
Survey Counties - Nebraska 1936-1938

County		Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 & Over	Unk.
York	Neg. Reactors	4	68	809	1001	604	131	68	66	44	29	29	16	8	2	1	0	3	0	0	0	112
	Pos. Reactors	1	9	79	139	123	49	32	52	45	53	36	25	18	6	2	3	2	1	0	0	17
	% Pos. Reactors	20	12	9	12	17	27	32	44	51	65	55	61	69	75	67	100	40	100	0	0	13
Phelps	Neg. Reactors	5	57	429	538	321	72	45	50	46	29	18	13	6	1	2	2	0	0	0	0	6
	Pos. Reactors	5	52	160	157	98	45	44	58	59	70	61	34	24	8	4	3	1	0	0	0	5
	% Pos. Reactors	50	51	27	23	23	39	50	54	56	71	77	72	80	89	67	60	100	0	0	0	45
Dundy	Neg. Reactors	7	40	302	334	163	35	25	26	25	21	18	8	3	3	0	1	0	1	0	0	1
	Pos. Reactors	2	49	103	147	104	26	32	33	40	52	23	17	18	5	2	1	1	0	0	0	3
	% Pos. Reactors	22	45	25	31	39	43	56	56	62	71	56	68	86	63	100	0	100	0	0	0	75
Hitchcock	Neg. Reactors	1	37	458	481	283	40	38	32	37	20	11	9	2	1	0	0	0	0	1	0	6
	Pos. Reactors	4	18	27	52	41	18	14	29	31	25	27	13	10	4	3	4	0	0	0	0	2
	% Pos. Reactors	80	33	6	10	13	31	27	48	46	56	71	59	83	80	100	100	0	0	0	0	25
Total Neg. Reactors		17	202	1998	2354	1371	278	176	174	152	99	76	46	19	7	3	3	3	1	1	0	125
Total Pos. Reactors		12	128	369	495	366	138	122	172	175	200	147	89	70	23	11	11	4	1	0	0	27
% Pos. Reactors		41	39	16	18	21	33	41	49	54	67	66	66	79	77	79	79	57	0	0	0	18

CHART 14

Number of Negative and Positive Reactors by Age Groups
York County Nebraska

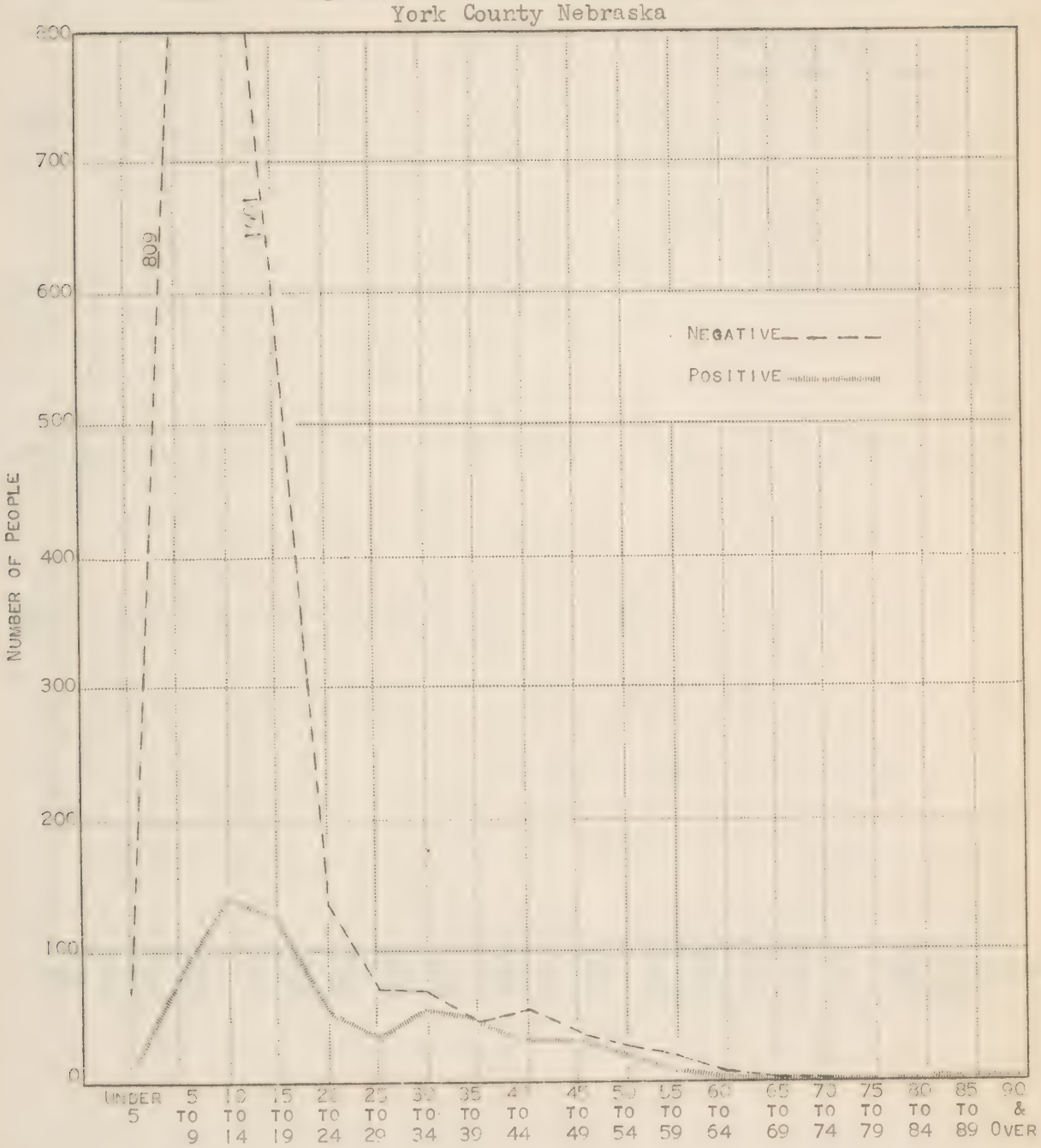


CHART 15

Number of Negative and Positive Reactors by Age Groups
Phelps County Nebraska

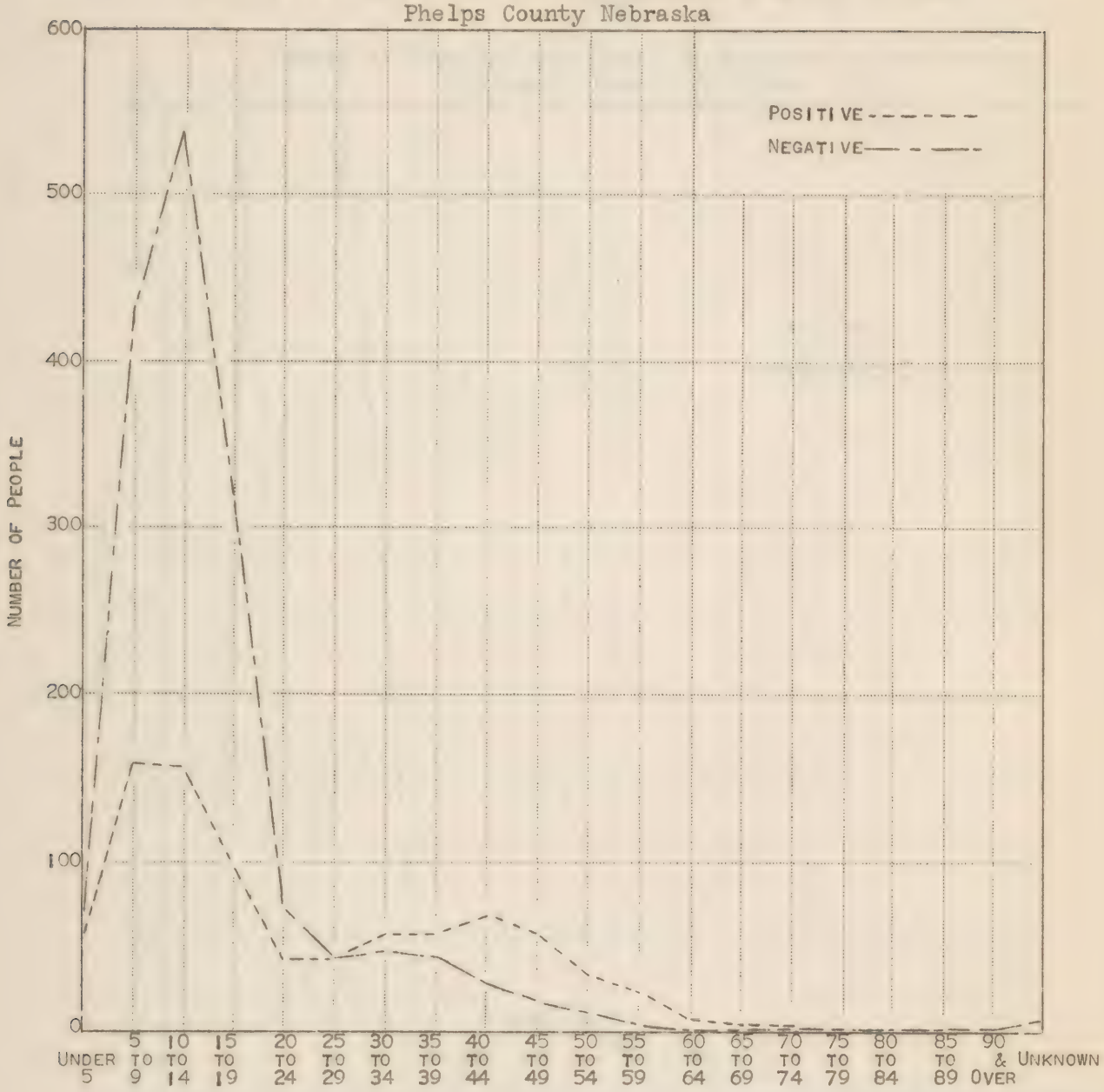


CHART 16

Number of Negative and Positive Reactors by Age Groups
Hitchcock County Nebraska

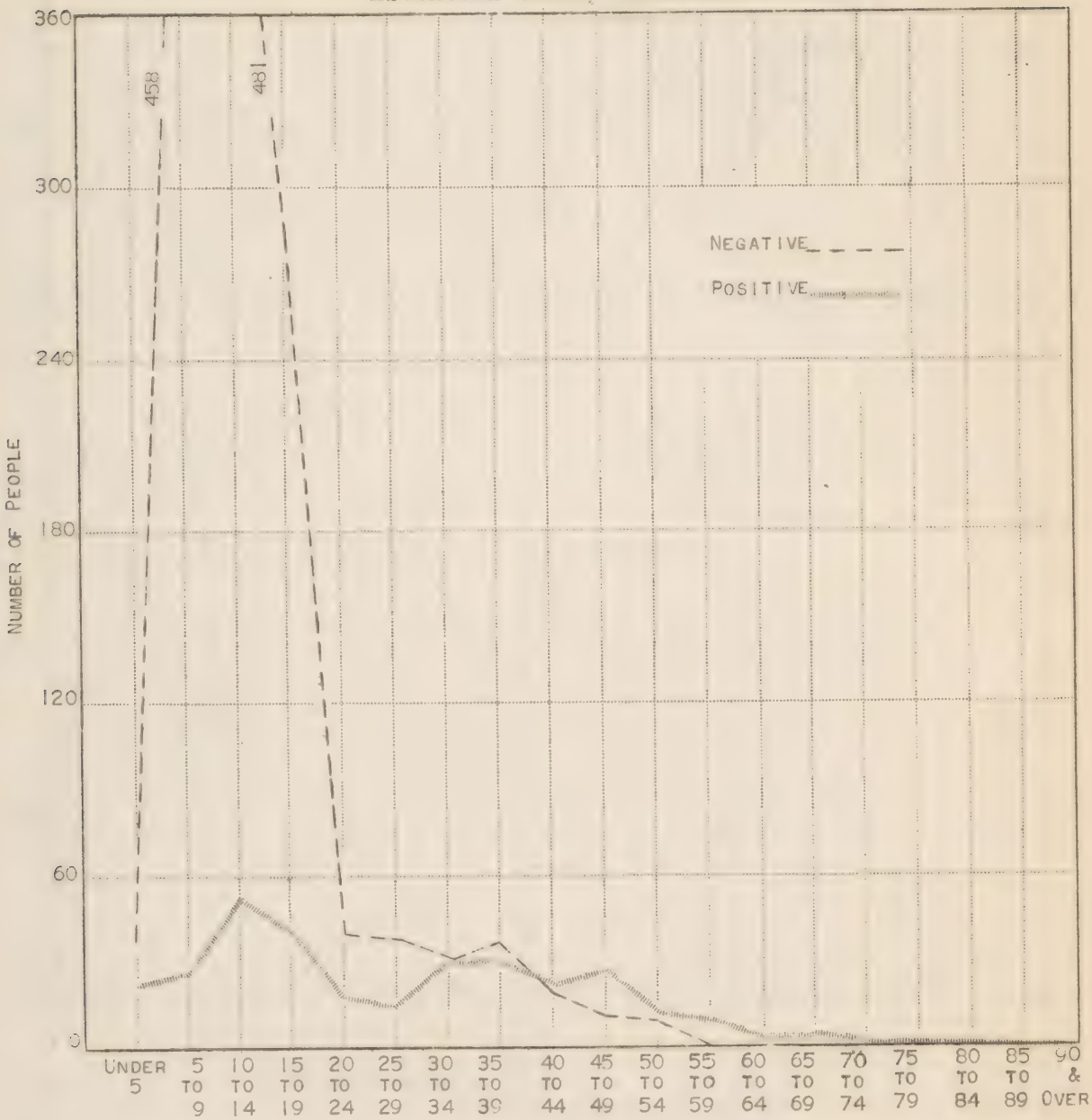


CHART 17

Number of Negative and Positive Reactors by Age Groups
Dundy County Nebraska

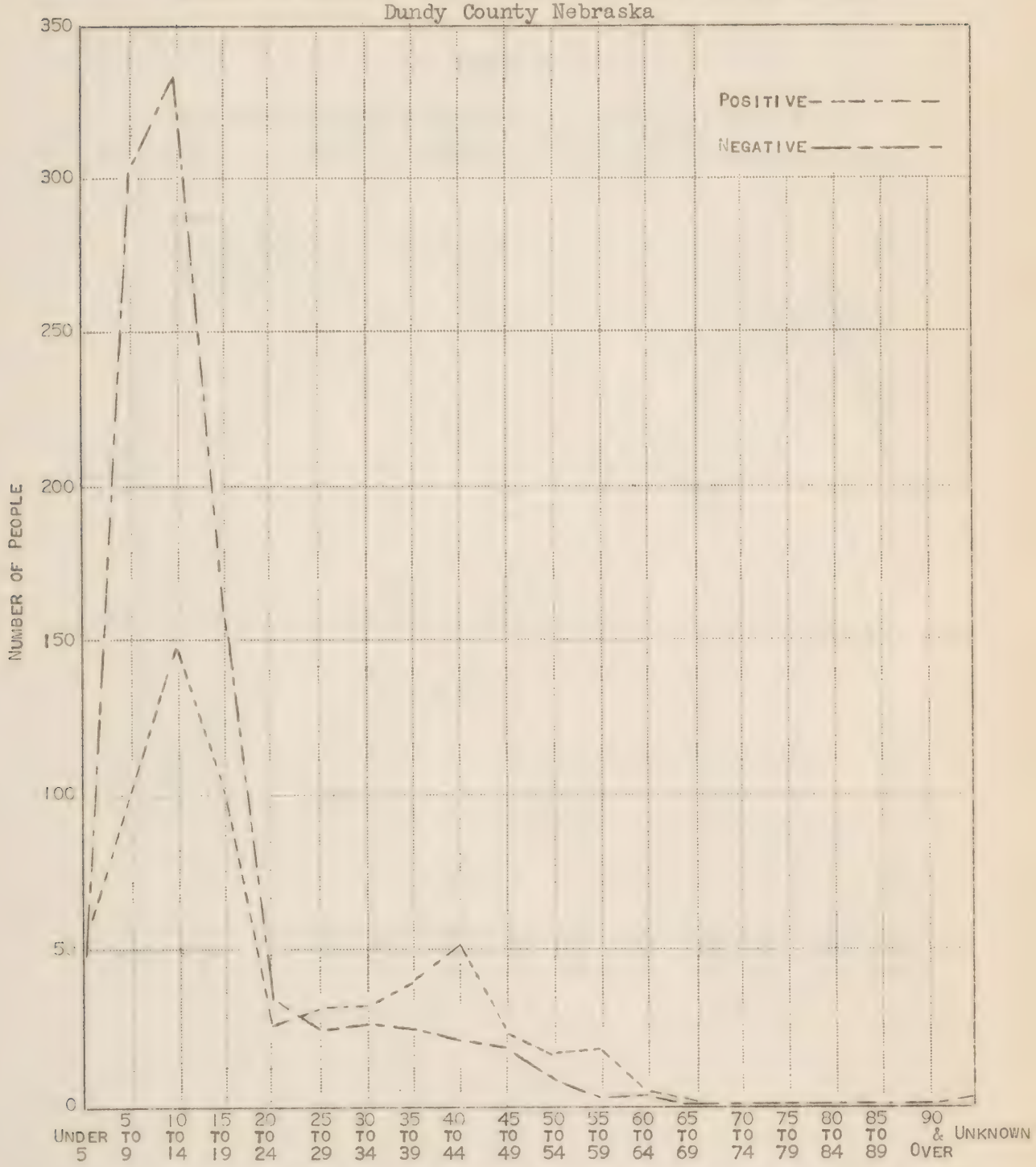
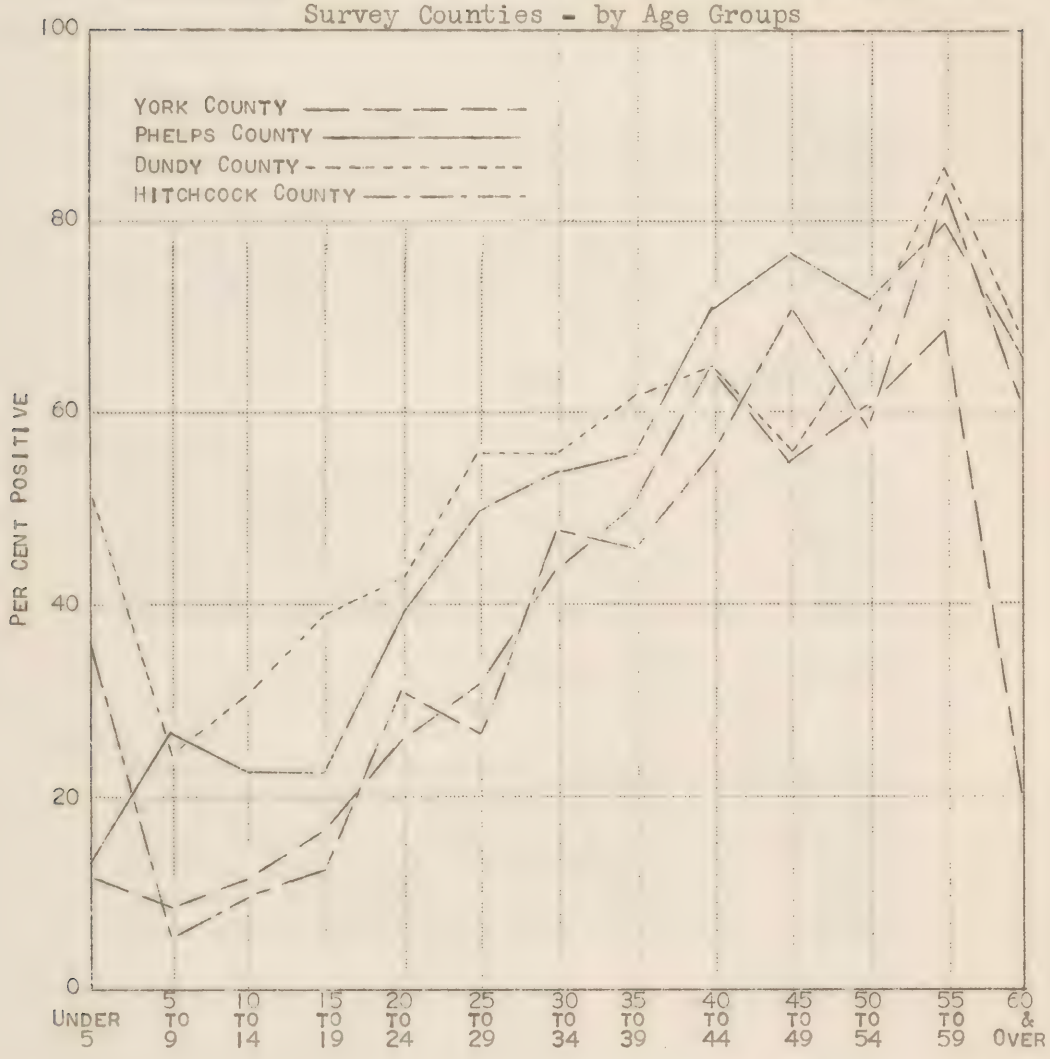


CHART 18

Percentage Positive Reactors to Tuberculin Skin Test
Survey Counties - by Age Groups



Financial Summary

One of the necessary prerequisites for the committee approval of a survey county was that they would contribute funds to help pay for the expense of the survey. The source of funds raised locally for the expense of the county surveys were as follows:

York County	
Firms and Individuals	$1,911.57
Chapter of American Red Cross	1,163.40
Board of Supervisors	950.00
School Boards	585.50
Nebraska Tuberculosis Association	564.65
Christmas Seal Funds	382.98
Women's Clubs	27.50
Total	$5,585.60
Phelps County	
Firms and Individuals	$1,514.75
Board of Supervisors	924.77
School Boards	224.25
Nebraska Tuberculosis Association	63.00
Christmas Seal Funds	91.35
Total	$2,818.12
Dundy County	
Firms and Individuals	$1,109.00
Board of Supervisors	200.00
School Boards	226.75
Nebraska Tuberculosis Association	63.00
Christmas Seal Funds	51.36
Farm Bureau Rabbit Hunt Fund	12.00
Total	$1,662.11
Hitchcock County	
Firms and Individuals	$ 506.50
School Board	337.25
Christmas Seal Fund	10.50
Nebraska Tuberculosis Association	63.00
Total	917.25

Buffalo County (Incomplete)

Firms and Individuals.	$ 409.25
Board of Supervisors	497.56
School Boards.	204.58
St. James School	20.00
A. O. Thomas School.	21.66
Nebraska Tuberculosis Association.	25.00
Total	$1,178.05

In Dundy, Phelps, and Hitchcock counties, the cost of the tuberculosis survey, from the State Funds appropriated specifically for the survey by the Legislature, from July 1, 1937 to January 1, 1939 was as follows:

Appropriated by State Legislature. . $15,000.00

Paid out for:

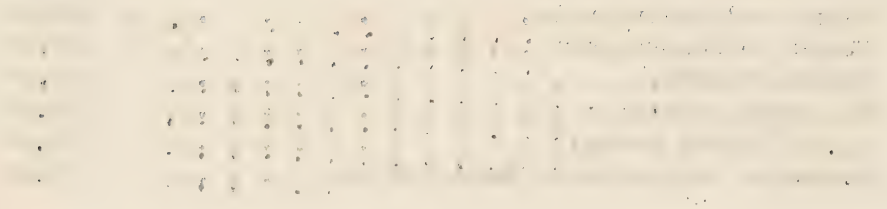
Skin tests.	250.90
X-rays.	3,770.50
Supplies, Equipment and Service . .	691.31
Consultation Fees	502.50
Salaries of Field Workers	4,012.35
Expenses of Field Workers	5,289.98
Total Paid Out . . .	$14,517.54

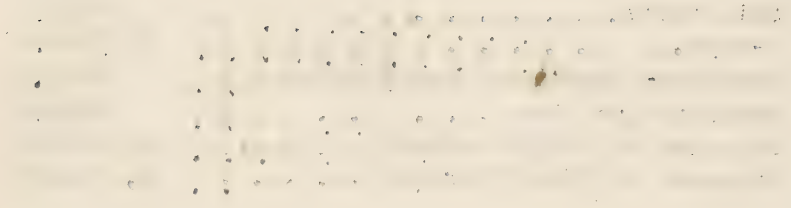
Balance on hand for remainder of biennium 482.46

The (State) Department of Health also assisted in defraying the expenses of the survey.

Their contribution consisted of:

Tuberculin.	$969.60
Travel expense of Consultants . . .	80.14
Total.	$ 1,049.74





III

TUBERCULOSIS IN NEBRASKA

People who make a study of the tuberculosis problem in Nebraska realize the limited facilities for the treatment of tuberculosis within the State. Nebraska has one sanatorium devoted exclusively to the care of the tuberculous. There are a number of other hospitals caring for patients with tuberculosis; however, many of these institutions do not maintain separate departments for their care.

The number of known cases of tuberculosis in Nebraska during the year 1935, according to the questionnaire, was 1146[1]. This number, however, does not represent the actual total number of cases of tuberculosis in the State. As a result of the experiences of the New York State Department of Health, according to Dr. Robert E. Plunkett, General Superintendent of Tuberculosis Hospitals, New York State Department of Health, "It has been determined that there are 6 active and 2 inactive cases in the hospital area for every death, or a total of 8 cases of tuberculosis which are in need of some follow-up or treatment."[2] From present day calculations, it is generally conceded that there are nine cases for every death from tuberculosis. In 1937

[1] Appendix - Table A

[2] Examination and Reexamination, Robert E. Plunkett, M. D.; Bulletin, The National Tuberculosis Association, September 1938

there were 261 deaths from tuberculosis in the State. Accordingly, the approximate number of cases in the State during 1937 was 2349.

With an estimated 2300 active cases in the State it can readily be assumed that a serious problem of care confronts the authorities. Since a survey to stamp out tuberculosis is under way more cases will be found in the future. There also seems to be a growing number of sick people who cannot afford the services of a private physician and hospital and these people are increasing the demand for state hospital beds in all state institutions. It is therefore reasonable to assume that a number of these tuberculosis patients who are being located will ask for State aid and the State Hospital for tuberculosis will be called upon to care for more and more tuberculosis patients. If more hospital care will be given there will probably be fewer deaths and the death rates will drop. The ratio of 8 cases per death is therefore a very conservative estimate.

In a report on the Hospital For Tuberculous, dated September 1, 1938, Mr. Eubank of the (State) Board of Control made this statement, "The survey which is now being conducted by the State Planning Board in cooperation with the (State) Health Department and the State Medical Association, we are sure will

cause increased demand for hospital facilities at this institution. The buildings which are now under construction we believe will only take care of the present crowded conditions and the present waiting list."

There are 263 beds at the State Hospital for the Tuberculous at Kearney. (Includes present construction, January, 1939). By way of comparison, a parallel might be drawn between the needs of the New York Region[1] and the needs of Nebraska. A recommendation in the New York Region was made for an immediate increase in beds to 1.5 beds per annual death to meet its present needs, and an increase to 2 beds per annual death to provide an adequate number of hospital beds to meet its future needs. There were 261 deaths from tuberculosis in 1937. On that basis, Nebraska needs approximately 391 beds now, and 522 beds to take care of its tuberculous patients in the future.

The Planning Board recommends that a unit providing 100 additional beds be constructed during the 10 year period at the Tuberculosis Hospital at Kearney, Nebraska.

[1] The Hospital Survey for New York, Haven Emerson, M. D., Vol. 1.

APPENDIX

FORM A

NEBRASKA MEDICAL ASSOCIATION
in cooperation with the
NEBRASKA DEPARTMENT OF HEALTH

Tuberculosis Survey Questionnaire *No. _____

1. Place _____ (City or Town) Nebraska. 2. Date of Record _____

3. Name of Patient _____

4. Address of Patient _____
(City or Town) (Number) (Street)

5. Sex_____6. Race _____7. Age _____*No._____

8. Married ____Single____Widow____Widower____Separated____Divorced____

9. Date Diagnosed _____

10. Method used in diagnosis (check): (a) clinical_____ (b) X-ray____
(c) Skin Test: Positive_____Negative_____
(d) Sputum: Positive_____Negative_____

11. Type (check): (a) Pulmonary_____(b) Gland_____(c) Bone_____
(d) Renal_____(e) Other_____

12. Condition of Patient at present date (check) (a) Arrested_____
(b) Undetermined_____(c) Active (Minimal)___(Moderately advanced)_____(Far advanced)_____
If moved away, where to_____
(City or Town) (Number) (Street)

13. Previous Treatment (check): (a) Home_____(b) Hospital_____
(c) Surgical (including pneumotherax)_
If hospital_____
(Name) (Location)

14. Contacts in home: (a) Number of children (under sixteen)_____
(b) Number of adults_____

15. Financial Status (check): Self-supporting___Border Line__Relief___
If self-supporting can patient pay for private hospitalization?____

_____
Signature of Doctor

Return this questionnaire to: Mr. M. C. Smith, Executive Secretary,
Nebraska State Medical Association,
Curtis, Nebraska

*Don't use this space
(Use reverse side for additional information)

FORM A

NEBRASKA OSTEOPATHIC ASSOCIATION
in cooperation with
NEBRASKA DEPARTMENT OF HEALTH

Tuberculosis Survey Questionnaire *No._____

1. Place_____Nebraska. 2. Date of Record_____
(City or Town)

3. Name of Patient_____
(City or Town) (Number) (Street)
(All above for the use of Physicians only)

STATISTICAL

5. Sex_____6. Race_____7. Age_____*No._____

8. (Check): Married___Single_____Widow__Widower____Separated____
Divorced___

9. Date Diagnosed_____

10. Method used in diagnosis (check): (a) Clinical___(b) X-ray_____
(c) Skin Test: Positive_____Negative_____
(d) Sputum: Positive_____Negative_____

11. Type (check): (a) Pulmonary____(b) Gland_____(c) Bone_____
(d) Renal_____(e) Other_____

12. Condition of Patient at present date (check):
(a) Arrested_____(b) Undetermined_____
(c) Active (Minimal___(Moderately advanced)__(Far advanced)
_____
If moved away, where to_____
(City or Town) (Number) (Street)

13. Previous Treatment (check): (a) Home_____(b) Hospital_____
(c) Surgical (including pneumothorax)_____
If Hospital_____
(Name) (Location)

14. Contacts in home: (a) Number of children (under sixteen)_____
(b) Number of adults_____

15. Financial Status (check): Self-supporting__Border line__Relief____
If self-supporting can patient pay for private hospitalization?____

*Don't use this space

_____
Signature of Doctor

Return this questionnaire to: Dr. I. D. Gartrell, D. O., Secretary,
Nebraska Osteopathic Association,
Clay Center, Nebraska

FORM B

NEBRASKA MEDICAL ASSOCIATION
in cooperation with the

NEBRASKA DEPARTMENT OF HEALTH

Tuberculous Survey

Hospital and Sanitorium Questionnaire

1. Name of Institution _____

2. Address _____

3. Total Number of Beds in Institution _____
   (a) For Adults _____
   (b) For Children (Under Sixteen) _____

4. Total Number Tuberculous Patients Handled _____
   (Report year January 1 - December 31, 1935)
   (a) Adults _____
   (b) Children (Under Sixteen) _____

5. Total Number Tuberculous Patient Days Care _____
   (Report year January 1 - December 31, 1935)
   (a) Adults _____
   (b) Children (Under Sixteen) _____

6. Names and Addresses of Tuberculous Patients Now in Your Hospital.
   (Note: The names and addresses of tuberculous individuals will be kept in the files of the State Medical Association.

NAME ADDRESS

_____

_____

_____

_____

(Use reverse side if necessary)

RETURN THIS QUESTIONNAIRE TO: Mr. M. C. Smith, Executive Secretary, Nebraska State Medical Association, Curtis, Nebraska.

TABLE A

Active Cases of Tuberculosis Reported and Estimated by Counties with Average Number of Deaths

1936

	[1]Active Cases reported in 1936	[2]Average Number of deaths per year for 11 yr. period 1926-1936	[3]Active Cases Estimated
State of Nebraska	1147	[4]335.0	3015
Adams	6	5.46	49
Antelope	0	1.00	9
Arthur	0	.09	1
Banner	1	.09	1
Blaine	0	.27	2
Boone	14	2.09	19
Box Butte	1	2.46	22
Boyd	0	.82	7
Brown	1	1.00	9
Buffalo	6	5.09	46
Burt	4	1.46	13
Butler	2	2.09	19
Cass	9	3.91	35
Cedar	13	1.46	13
Chase	3	.82	7
Cherry	0	1.36	12
Cheyenne	8	1.18	11
Clay	1	3.18	29
Colfax	3	1.46	13
Cuming	8	2.18	20
Custer	2	3.72	33
Dakota	5	1.46	13
Dawes	5	2.36	21
Dawson	4	2.37	21
Deuel	0	.46	4
Dixon	3	1.73	15
Dodge	3	4.18	38
Douglas	141	116.46	1048
Dundy	0	1.09	10
Fillmore	4	2.64	24
Franklin	2	1.36	12

[1]Questionnaire to all physicians and hospitals
[2](State) Department of Health
[3]Statistics indicate 9 active cases per death
[4]Does not include deaths of out-of-state residents

TABLE A
(Continued)

Frontier	14	.55	5
Furnas	1	2.00	18
Gage	1	5.64	51
Garden	1	.46	4
Garfield	0	.73	7
Gosper	0	.46	4
Grant	0	0.00	0
Greeley	1	1.36	12
Hall	9	5.73	52
Hamilton	1	1.55	14
Harlan	0	1.55	14
Hayes	3	.64	6
Hitchcock	0	.36	3
Holt	3	1.91	17
Hooker	0	.27	2
Howard	2	1.55	14
Jefferson	8	3.00	27
Johnson	6	2.91	26
Kearney	1	2.65	23
Keith	1	.91	8
Keya Paha	0	.09	1
Kimball	3	1.36	12
Knox	7	9.27	83
Lancaster	116	27.00	243
Lincoln	6	3.55	32
Logan	0	.36	3
Loup	0	.27	2
McPherson	0	.09	1
Madison	13	5.18	47
Merrick	1	1.46	13
Morrill	0	1.18	11
Nance	7	1.55	14
Nemaha	2	2.27	20
Nuckolls	2	1.73	15
Otoe	3	4.73	42
Pawnee	2	1.64	15
Perkins	0	.18	2
Phelps	0	.82	7
Pierce	4	2.36	21
Platte	11	3.27	29
Polk	5	1.46	13
Red Willow	4	2.27	20
Richardson	2	4.46	40
Rock	0	.36	3
Saline	23	3.18	29
Sarpy	1	.73	7

TABLE A
(Continued)

Saunders	10	3.55	32
Scotts Bluff	14	9.09	82
Seward	5	1.91	17
Sheridan	8	1.55	14
Sherman	1	1.64	15
Sioux	0	.64	6
Stanton	1	.73	7
Thayer	1	2.82	25
Thomas	0	.27	2
Thurston	0	12.82	115
Valley	0	1.18	11
Washington	2	2.18	20
Wayne	0	1.36	12
Webster	3	1.82	16
Wheeler	0	0.00	0
York	5	3.64	33
Hospitals	[1]584		

[1]This figure represents cases reported on hospital questionnaire where county residence was not given.

TABLE B

Number of Deaths and Death Rates From Tuberculosis
By Counties

Nebraska 1926 - 1936

	Population[1]	Total Number[2] deaths for 11 yrs.	Average death rate per 100,-000 population
State of Nebraska	1,377,963	[3]3689	24.1
Adams	26,275	60	20.74
Antelope	15,206	11	6.58
Arthur	1,344	1	6.69
Banner	1,676	1	5.36
Blaine	1,584	3	17.03
Boone	14,738	23	14.17
Box Butte	11,861	27	20.65
Boyd	7,169	9	12.26
Brown	5,772	11	17.32
Buffalo	24,338	56	20.92
Burt	13,062	16	11.11
Butler	14,410	23	14.50
Cass	17,684	43	22.09
Cedar	16,427	16	8.83
Chase	5,484	9	14.95
Cherry	10,898	15	12.48
Cheyenne	10,187	13	11.59
Clay	13,571	35	23.44
Colfax	11,434	16	12.68
Cuming	14,327	24	15.21
Custer	26,189	41	14.24
Dakota	9,505	16	15.25
Dawes	11,493	26	20.53
Dawson	17,875	26	13.19
Deuel	3,992	5	11.27
Dixon	11,586	19	14.93
Dodge	25,273	46	16.55
Douglas	232,982	1281	48.91
Dundy	5,610	12	19.43

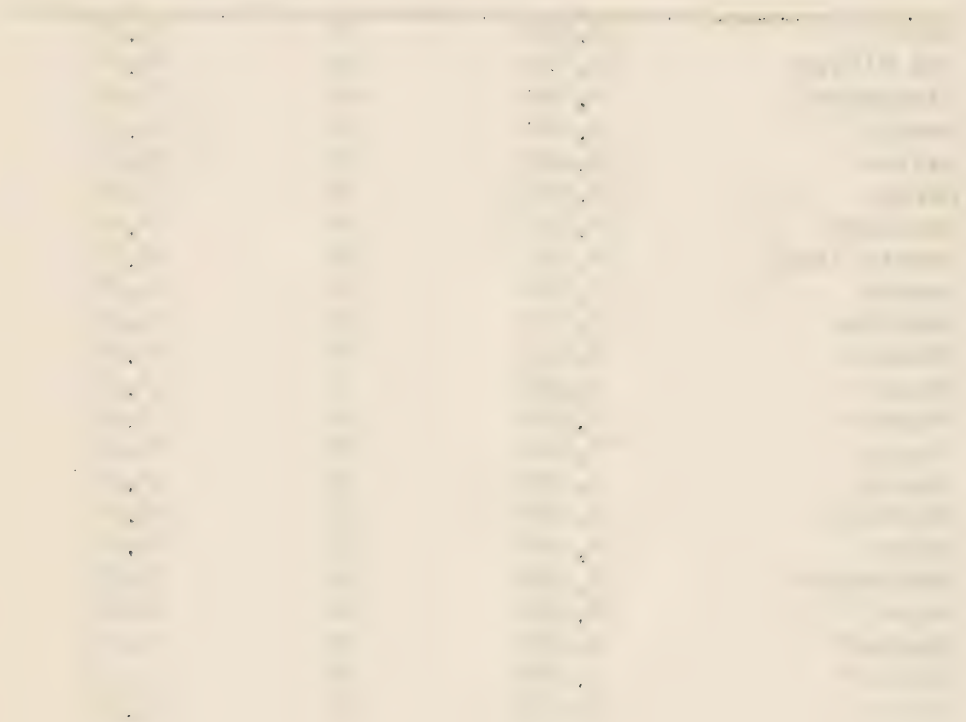
[1]U. S. Consus 1930
[2](State) Dopartmont of Health
[3]Does not includo deaths of out-of-stato residents

TABLE B
(Continuod)

Fillmore	12,971	29	20.55
Franklin	9,094	15	14.95
Frontier	8,114	6	6.77
Furnas	12,140	22	16.48
Gage	30,242	62	18.67
Garden	5,099	5	8.82
Garfield	3,207	8	22.76
Gosper	4,287	5	10.50
Grant	1,427	0	0
Greeley	8,442	15	16.12
Hall	27,117	63	21.14
Hamilton	12,159	17	12.74
Harlan	8,957	17	17.30
Hayes	3,603	7	17.76
Hitchcock	7,269	4	4.95
Holt	16,509	21	11.57
Hooker	1,180	3	22.83
Howard	10,020	17	15.47
Jefferson	16,409	33	18.27
Johnson	9,157	32	31.78
Kearney	8,094	28	31.49
Keith	6,721	10	13.54
Keya Paha	3,203	1	2.80
Kimball	4,675	15	29.09
Knox	19,110	102	48.48
Lancaster	100,324	297	26.73
Lincoln	25,627	39	13.85
Logan	2,014	4	17.87
Loup	1,818	3	14.85
McPherson	1,358	1	6.33
Madison	26,037	57	19.89
Merrick	10,619	16	13.66
Morrill	9,950	13	11.86
Nance	8,718	17	17.78
Nemaha	12,356	25	18.36
Nuckolls	12,629	19	13.70
Otoe	19,901	52	23.74
Pawnee	9,423	18	17.38
Perkins	5,834	2	3.06
Phelps	9,261	9	8.86
Pierce	11,080	26	21.31
Platte	21,181	36	15.43

TABLE B
(Continued)

Polk	10,092	16	14.37
Red Willow	13,859	25	16.39
Richardson	19,826	49	22.43
Rock	3,366	4	10.70
Saline	16,356	35	19.43
Sarpy	10,402	8	7.02
Saunders	20,167	39	17.61
Scotts Bluff	28,644	100	31.72
Seward	15,938	21	11.97
Sheridan	10,793	17	14.37
Sherman	9,122	18	17.97
Sioux	4,667	7	13.72
Stanton	7,809	8	9.35
Thayer	13,684	31	20.67
Thomas	1,510	3	17.88
Thurston	10,462	141	122.56
Valley	9,533	13	12.38
Washington	12,095	24	18.03
Wayne	10,566	15	12.87
Webster	10,210	20	17.82
Wheeler	2,335	0	0
York	17,239	40	21.15



FORM C

DEPARTMENT OF HEALTH
State Tuberculosis Survey

Place of Death: County_____City_____

No._____St._____or Inst._____

Name_____

Residence: State_____County_____

City_____No._____St._____

Sex_____Age_____

Single_____Mar._____Wid._____Div._____

Date of Death_____

Husband or Wife of_____

Address_____

Name of Father_____

Address_____

Name of Mother_____

Address_____

Informant_____

Address_____

Death Cert. Sig. (Phys.)_____

Address_____

Note: Standard Certificate of Death form used in the (State) Department of Health. The above information was copied from that record.

Identification Number..... INDIVIDUAL TEST RECORD School District Number.....

1. Name..... (Last, First) 2. Occupation or grade in school.....

3. Address..... (Street or RFD, City) 4. County of Residence..... Case No.....

5. Date today..... 6. Sex..... 7. Race..... 8. Date of birth..... (Mo. Da. Yr.)

9. Name of (A) Mother..... (B) Father.....

10. Have you been in contact with a tuberculous person?..... If contact, specify:

(A) Through whom..... (B) Whether past or present.....

11. If examined before today, specify: (A) When..... (B) Where..... (C) Method and result (a) Skin test..... (b) X-Ray..... (c) Clinical..... (d) Sputum.....

(D) Name of physician making examination.....

12. *Skin Test: (a) Where given.....

(b) First strength, date given..... Result.....

(c) Second strength, date given..... Result.....

13. *X-Ray: (a) Date taken..... Physician.....

(b) Diagnosis and recommendations.....

.....

*To be filled in by doctors making county survey NSPB—TB-1

SURVEY OF HUMAN TUBERCULOSIS

INDIVIDUAL TEST RECORD

1. Identification Number..... 2. Occupation or grade in school.....

3. Address..... (Street or RFD, City) 4. County of Residence.....

5. Date today..... 6. Sex..... 7. Race..... 8. Date of birth..... (Mo. Da. Yr.)

9. Country of birth (A) ..... (B) Mother..... (C) Father.....

10. Have you been in contact with a tuberculous person?..... If contact, specify:

(A) Through whom..... (B) Whether past or present.....

11. If examined before today, specify: (A) When..... (B) Where..... (C) Method and result (a) Skin Test..... (b) X-Ray..... (c) Clinical..... (d) Sputum.....

(D) Name of physician making examination.....

12. *Skin Test: (A) Where given.....

(B) First strength, date given..... Result.....

(C) Second strength, date given..... Result.....

13. *X-Ray: (A) Date taken..... Physician.....

(B) Diagnosis and recommendations.....

.....

NSPB—TB-1

Survey of Human Tuberculosis
Family Record

Date of record ..... County ..... Case No. ..... School Dist. No. .....

Name of Contact Case or Positive Reactor ..... Tel. No. .....

Address .....

.....

If contact, through whom ..... Address .....

Present Status - Disposition of Contact or Positive Reactor .....

Family Name	Address if residence elsewhere	Occupation	Sex	Age	Race	Date & result of Exam. Skin Test	X-Ray	Clinical	Sputum	Doctor
Father										
Mother										
Children										
1.										
2.										
3.										
4.										
Others in household and relationship										
1.										
2.										
3.										
4.										

Deceased members of family ..... Date ..... Cause of Death .....

.....

.....

Wage Earner Name ..... Address .....

Employment Steady or Irregular .....

Classification 1st. ..... 2nd. ..... 3rd. .....

Home Condition .....

Remarks: .....

HUMAN TUBERCULOSIS SURVEY NEBRASKA

NEBRASKA STATE PLANNING BOARD

JANUARY 1939